

**Baseline Environmental Assessment
Conducted Pursuant to Section 20126(1)(c)
of 1994 PA 451, Part 201, as amended**

**546 North Mechanic Street
Jackson, Michigan**

Performance Automotive, Inc.

January 21, 2010

ASTI ENVIRONMENTAL



ASTi
ENVIRONMENTAL

**Baseline Environmental Assessment
Conducted Pursuant to Section 20126(1) (c)
of 1994 PA 451, Part 201, as amended**

**546 North Mechanic Street
Jackson, Michigan**

January 21, 2010

Report Prepared For:

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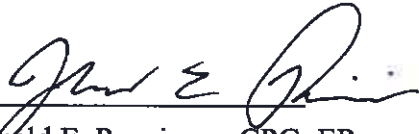
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1.0 IDENTIFICATION OF AUTHOR AND DATE OF BEA COMPLETION

Donald E. Penniman, CPG, EP, assumes the primary responsibility for the data assembly, interpretation, and technical conclusions for the attached BEA. Mr. Penniman's current resume is provided as Attachment 9.1.

This BEA was conducted on January 7, 2010

The completion date of this BEA is January 21, 2010



Donald E. Penniman, CPG, EP
Director – Western Great Lakes

1/21/10
Date

2.0 INTRODUCTION

ASTI Environmental (ASTI) has been retained by the City of Jackson, on behalf of Performance Automotive, Inc., to prepare and disclose a Baseline Environmental Assessment (BEA) for a property located at 546 North Mechanic Street in Jackson, Michigan (Property). A Site Location Map is provided as Figure 1.

This BEA meets the Category S technical standards and has been conducted pursuant to Section 20126(1)(c) and submitted for determination pursuant to Section 20126(1)(c)(ii) of Part 201 of the Michigan Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Part 201) and Part 9 Rules promulgated under Section 20126(8) and follows the *Instruction for Preparing and Disclosing Baseline Environmental Assessments and Section 7a Compliance Analyses to the Michigan Department of Environmental Quality and for Requesting Optional Determinations* – Effective Date: March 11, 1999.

2.1 Past Activities

The Property has been used for commercial and industrial purposes since the late 1800s. Occupants have included Jackson Paper Company (1886-1893), Michigan Bag & Paper Company (1899-1907), Potter Manufacturing Company (1930), a bottling company (1950), Jack Smith Beverages Inc. (1975-1985), Owen Machine & Tool, Inc. (1997), and Open Machine Systems, Owen Machine & Tool, Inc., and Quality Transmission Parts (2002). The present building was constructed in 1972 and has been used for a beverage distribution business, machine shop operations, and an automotive transmission repair business.

2.2 Intended Activities

Performance Automotive Inc. purchased the Property on November 24, 2009. The Property will be used for automotive parts sales and machine shop services in support of the automotive parts business.

3.0 PROPERTY DESCRIPTION & INTENDED HAZARDOUS SUBSTANCE/USE

This section presents information on the Property, intended hazardous substance use, and historical hazardous substance use.

3.1 Location and Legal Description

The Property is located on the southwest corner of East Ganson Street and North Mechanic Street in the southeast corner of Section 34, T2S, R1W, in the City of Jackson, Jackson County, Michigan. The Property consists of a single parcel assigned parcel number 1-015100000. The legal description is provided in the assessment information in Attachment 9.2.

Adjoining properties include the following land uses.

North	Vacant industrial building located at 600 North Mechanic Street
South	Michner Plating located at 520 North Mechanic Street
East	Hitches & More at 101 East Ganson, Ace Auto at 100 East Ganson
West	A railroad right-of-way with the Grand River beyond.

A Site Location Map is provided as Figure 1. A Site Features Map showing the property lines and surrounding properties is provided as Figure 2.

Present structures on the Property are an industrial building occupying 31,554 square feet and a garage occupying 324 square feet. The Property is fenced on the north and west sides. The remainder of the Property is covered primarily with asphalt pavement.

3.2 Site Photographs

Photographs depicting important features of the Property and adjoining parcels were taken by Shawn Shadley during a site inspection on June 25, 2009 and are provided as Attachment 9.3.

3.3 Existing BEAs or Other Environmental Reports

A BEA was conducted on the Property by Bradley Environmental Technology, L.C. and dated August 16, 2002. This BEA was based on gasoline constituents detected in groundwater samples collected from two temporary monitoring wells.

The Property is listed as a closed leaking underground storage tank (LUST) site. Releases were discovered during underground storage tank (UST) removals during 1990 and 1994. Corrective actions in response to these releases culminated in a Closure Report prepared by MacKenzie Environmental Services, Inc. dated November 30, 1999. The LUST closure was completed as a Tier II closure and a restrictive covenant was placed on the Property.

ASTI performed a Phase I Environmental Site Assessment (ESA) on the Property during 2009 with a report dated July 8, 2009. Recognized environmental conditions identified in the Phase I ESA include past industrial uses, listing of the Property as a BEA site and a closed LUST site, antifreeze observed in a catch basin, open containers of oils and fuels, sealed trench drains, and the historical use of the southern adjoining property as a foundry, machine shop, and plating company. These recognized environmental conditions were the basis for Phase II ESA activities described in Section 4.0 of the present BEA. A copy of the Phase I ESA is provided in Attachment 9.4.

3.4 Intended Hazardous Substance Use

Hazardous substances to be stored and used on the Property by Performance Automotive, Inc. are the following:

- Motor oil
- Automatic transmission fluid
- Gear oil
- Hydraulic oil
- Antifreeze (glycol)
- Mineral spirits
- Acetone
- Refrigerant

Based on the presence of components of petroleum products (benzene, ethylbenzene, xylenes, trimethylbenzenes, 2-methylnaphthalene, naphthalene, propylbenzenes, and butylbenzene)

detected in groundwater and soil samples at concentrations exceeding Generic Residential Cleanup Criteria, the present BEA has been prepared as a Category S BEA.

These substances, with the Chemical Abstract Service (CAS) numbers for the products and major constituents, are listed on Table 1. Table 1 includes a listing of specific products and chemicals listed on Material Safety Data Sheets (MSDSs) provided by Performance Automotive, Inc. and a list of other hazardous substances -- a general listing of chemicals that are typical of fuels, other automotive fluids, and used oils. MSDSs are provided in Attachment 9.5.

3.5 Historical Hazardous Substance Use

According to historical records, the Property has been used for production of paper products, manufacturing, machine shop, beverage distribution, and automotive repair.

Historical hazardous substance use has included vehicle fuels, hydraulic oils, cutting oils, lubricants, other automotive fluids, paints, and solvents.

4.0 KNOWN CONTAMINATION

ASTI Environmental (ASTI) has been retained by the City of Jackson, on behalf of Performance Automotive, Inc. to prepare and disclose a Baseline Environmental Assessment (BEA) for the Property located at 546 North Mechanic Street in Jackson, Michigan. Engineering controls will be used distinguish new releases from existing contamination. More on the use of engineering controls is discussed in Section 6.0.

4.1 Contaminants Exceeding Generic Residential Criteria

This BEA was prepared in response to the presence of gasoline constituents, lead and cyanide in groundwater and tetrachloroethene and metals in soils at concentrations that exceed their respective generic residential criteria.

4.1.1 Previous Environmental Investigations

Previous environmental investigations were conducted by MacKenzie Environmental Services, Inc. and Bradley Environmental Technology, LC. MacKenzie Environmental Services completed corrective actions in regard to releases from former USTs and prepared a Closure Report during 1999. Residual contamination was addressed by a Restrictive Covenant on the Property. Bradley Environmental Technology prepared a BEA during 2002 based on the presence of gasoline constituents in groundwater, apparently residual contamination from the UST releases.

4.1.2 Phase II Environmental Site Assessment – November and December 2009

ASTI performed Phase II ESA investigations on November 5, 2009 and December 15, 2009 to address recognized environmental conditions identified in the July 8, 2009 Phase I ESA and to provide current data for the present BEA. Nine soil borings, including three soil borings converted to temporary monitoring wells, were drilled and sampled on November 5, 2009. To better define the extent of groundwater contamination, five additional temporary monitoring wells were installed and sampled on December 15, 2009. One additional soil sample was collected from one of the temporary monitoring well boreholes. Sampling locations are illustrated on Figure 3.

Soil borings were drilled using a direct-push hydraulic drilling rig. Soil samples were collected in plastic sleeves from the core barrels, examined and logged by a geologist, and scanned for the presence of VOCs using a photoionization detector (PID). Soil samples were

selected for laboratory analysis based on visual or olfactory evidence of contamination, PID readings, or depth intervals similar to those in which contamination was detected during previous investigations. Soil samples were collected in laboratory-cleaned containers. Samples for analysis for VOCs were preserved in the field with methanol by U.S. EPA Method 5035. Soils underlying the Property are predominantly sands and silty sands. Soil boring logs are presented in Attachment 9.6.

Temporary monitoring wells were constructed using 1-inch diameter PVC well screens and riser pipe. Groundwater samples were collected by pumping with a peristaltic pump until the discharged groundwater was visibly clear and collecting samples directly from the pump discharge into laboratory-cleaned containers.

Groundwater and soil samples were transported under chain-of-custody to Brighton Analytical LLC. All samples collected on November 5, 2009 were analyzed for volatile organic compounds (VOCs); selected samples were analyzed for polynuclear aromatic compounds (PNAs), lead, Michigan-10 metals (arsenic, barium, cadmium, chromium, copper lead, mercury, selenium, silver, and zinc), glycols, and cyanide. Based on the results of analyses of these samples, the groundwater samples and soil sample collected on December 15, 2009 were analyzed for leaded and unleaded gasoline parameters.

Groundwater Contamination

Relevant exposure pathways for groundwater are drinking water ingestion (DW), groundwater/surface water interface (GSI), groundwater direct contact (GDC) and groundwater volatilization to indoor air inhalation (GVIAI).

GVIAI and GDC are relevant exposure pathways for Property, although detected contaminant concentrations are well below GVIAI and GDC criteria.

Data for contaminants in groundwater detected at concentrations exceeding generic residential criteria during the investigation are summarized on the following table:

Chemical Name	CAS Number	Criteria Exceeded	Highest Concentration (µg/L)	Location
Benzene	71432	DW, GSI	300	PA-GW-GP-8
Ethylbenzene	100414	DW, GSI	1,400	PA-GW-GP-8
1,2,3-Trimethylbenzene	526738	DW, GSI	1,200	PA-GW-GP-8
1,2,4-Trimethylbenzene	95636	DW, GSI	470	PA-GW-GP-8
1,3,5-Trimethylbenzene	108678	DW, GSI	660	PA-GW-GP-8
2-Methylnaphthalene	91576	DW	360	PA-GW-GP-8
Naphthalene	91203	DW, GSI	680	PA-GW-GP-8
n-Butylbenzene	104518	DW	100	PA-GW-GP-8
n-Propylbenzene	103651	DW	240	PA-GW-GP-8
Xylenes	1330207	DW, GSI	2,800	PA-GW-GP-8
Lead	7439921	DW	37	PA-GW-GP-10
Cyanide	57125	GSI	5.2	PA-GW-GP-6

Toluene, isopropylbenzene, sec-butylbenzene, and tetrahydrofuran were also detected in groundwater samples at concentrations below generic residential criteria.

Groundwater contamination by VOCs is limited to the northwest portion of the Property as indicated by the absence of VOCs at concentrations exceeding generic residential criteria in temporary monitoring wells PA-GW-GP-11, PA-GW-GP-12, PA-GW-GP-13, and PA-GW-GP-14 as shown on Figure 3. The extent of groundwater contamination to the east of temporary monitoring well PA-GW-GP-10 is estimated based on the direction of groundwater flow determined in previous environmental investigations. Lead was detected in groundwater samples throughout the Property and appears to be from an off-site source. Cyanide in groundwater is limited to the southern property boundary adjoining the Michner Plating property.

Groundwater sample analytical results for compounds detected in any temporary monitoring well are summarized on Table 2. Detections of compounds detected at concentrations exceeding generic residential criteria are illustrated on Figure 3. Analytical results (laboratory data sheets) are presented in Attachment 9.7.

Soil Contamination

Relevant exposure pathways for contaminants in soil are drinking water protection (DWP), groundwater/surface water interface protection (GSIP), direct contact (DC) and soil volatilization to indoor air inhalation (SVIAI).

Data for contaminants in soils detected at concentrations exceeding generic residential criteria during the November and December 2009 Phase II ESA investigations are summarized below:

Chemical Name	CAS Number	Criteria Exceeded	Highest Concentration (µg/Kg)	Location
Tetrachloroethene	127184	DWP	110	PA-SB-GP-3
Arsenic	7440382	DWP, DC	12,000	PA-SB-GP-3
Chromium	16065831	GSIP	11,000	PA-SB-GP-4
Selenium	7782492	GSIP	2,400	PA-SB-GP-7

Lead was detected in soil samples at concentrations exceeding its Default Background Level, but below any applicable generic residential criteria. The presence of elevated concentrations of arsenic, lead, selenium, and other metals is typical of soils in historic industrial areas.

Soil sample analytical results are summarized on Table 3. Metals listed on Table 3 were detected at concentrations above Default Background Levels. Figure 3 illustrates detections of tetrachloroethene and metals at concentrations exceeding generic residential criteria. None of the chemicals detected in soils at concentrations exceeding generic residential criteria are characteristic of hazardous substances to be stored or used by Performance Automotive, Inc.

Analytical results (laboratory data sheets) for soil samples collected during August and September 2009 are presented in Attachment 9.9.

4.2 Abandoned Containers

No abandoned or discarded barrels, drums, containers, or other receptacles containing hazardous substances are present on the Property. Small quantities of used oil and other automotive fluids in 5-gallon buckets observed during the Phase I ESA have been removed from the Property.

4.3 Other Media

No other media were sampled to support the preparation of this BEA.

4.4 Basis of Conclusion the Property is a Facility

The presence of gasoline constituents, as presented on Table 2, lead, and cyanide in groundwater at concentrations exceeding DW and GSI criteria; and tetrachloroethene, arsenic, chromium and selenium in soils at concentrations exceeding DWP, GSIP, and DC criteria, is the basis of the conclusion that the Property is a facility.

5.0 LIKELIHOOD OF OTHER CONTAMINATION

A Phase I Environmental Site Assessment (ESA) prepared in general accordance with the All Appropriate Inquiry standard as included in ASTM Standard Practice E1527-05 was completed on July 8, 2009 by ASTI. The Phase I ESA included assessment of past uses of the Property and adjoining properties, including discussion of previous environmental investigations. The complete Phase I ESA is provided as Attachment 9.4.

Analytical parameters for the Phase II ESA included a wide variety of chemical compounds that could potentially be present on the Property from historic uses of the Property and adjoining properties.

Based on the results of the Phase I and Phase II ESAs, it is ASTI's opinion that it is unlikely that contamination is present on the Property other than soil and groundwater contamination as discussed above in Section 4.

As described further in Section 6, all areas of known or potential contamination will underlie paved surfaces.

6.0 ALTERNATIVE APPROACHES

The purpose of this BEA is to provide Performance Automotive, Inc. with an exemption from liability related to existing contamination on the Property. Environmental investigations have been completed at the Property in response recognized environmental conditions (RECs) identified in the July 8, 2009 Phase I ESA. Results of these investigations indicate soil and groundwater contamination are present underlying the Property. Alternative approaches consisting of engineering controls will be used to distinguish new releases from existing contamination.

6.1 Engineering Controls - Interior

Engineering controls within the industrial building and the garage will consist of the existing pavement and secondary containment. Pavement and drain structures will be repaired and maintained to provide a barrier between any leakage or spillage and the underlying soils and groundwater.

The entire interior of each building is paved with concrete approximately six inches thick. All exits from the buildings exit onto paved surfaces. The concrete pavement within each building is in good condition. This paved interior serves as secondary containment for oils and other liquids anticipated to be used by Performance Automotive, Inc. Cracks will be caulked using silicone caulk or other caulking compound that is resistant to oils and petroleum-based solvents. The pavement will be inspected annually and any new cracks or worn caulking will be patched or re-caulked.

Most of the trench drains within the main industrial building have been sealed with concrete. The remaining trench drains in the north end of the building will be sealed with a high early strength concrete mix.

Oil and Automotive Fluids Storage

Oil and automotive fluids in 55-gallon drums will be stored in a vertical rack on the east side of the service area. A drip pan will be used under the bungs of the drums. Smaller containers of automotive fluids will be stored in cabinets or racks with secondary containment pans under and/or around them. Spent fluids, such as used antifreeze, will be stored within

secondary containment pads in the storage area. Spill kits including sorbent pads and granular sorbents will be placed in the storage area.

The buildings are accessed by overhead doors suitable for access by large trucks. All deliveries of automotive fluids and removal of spent fluids will be indoors on paved surfaces, with engineering controls as described above.

6.2 Engineering Controls - Exterior

The entire exterior area of the property is paved with asphalt, with the exception of small areas of grass along the south and southwest side portions of the building. Cracks in the existing asphalt will be cleaned of vegetation and debris and patched with a rubberized asphalt material. Areas of existing asphalt that are highly deteriorated will be repaired by removing broken pavement, replacing and recompact the subgrade materials, and repaving with asphalt a minimum of three inches thick. Following patching, each crack, expansion joint, or patched area will be inspected and any gaps will be re-patched.

The present areas of grass will be paved with asphalt a minimum of three inches thick or covered with an impermeable membrane resistant to petroleum products and surfaced with landscaping materials.

7.0 CONCLUSIONS

The BEA process for the property located at 546 North Mechanic Street in Jackson, Michigan (Property) has reached the following conclusions:

- The Property has been used for production of paper products, as a beverage distributor, as a machine shop, and for automotive repairs.
- Gasoline constituents, lead, and cyanide are present in groundwater at concentrations exceeding DW and GSI criteria.
- Tetrachloroethene, arsenic, chromium and selenium are present in soils at concentrations exceeding DWP, GSIP, and DC criteria.
- The presence of gasoline constituents, lead, and cyanide in groundwater and tetrachloroethene, arsenic, chromium, and selenium in soils on the Property at concentrations exceeding applicable generic residential criteria is the basis of the conclusion that the Property is a facility.
- The Property will be used for automotive parts sales and machine shop services in support of the automotive parts business. Hazardous substance use will include motor oil, automatic transmission fluid, gear oil, hydraulic oil, antifreeze, mineral spirits, acetone, and refrigerant. Based on the presence of petroleum compounds in groundwater, a Category S BEA is appropriate.
- Engineering controls consisting of paved surfaces and secondary containment will be used to distinguish potential future releases from existing contamination.

8.0 REFERENCES

The following references were used to prepare this Baseline Environmental Assessment:

1. *Part 201 of the Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended.*
2. *Instructions for Preparing and Submitting Baseline Environmental Assessments and 7a Compliance Analysis to the Michigan Department of Environmental Quality and for Requesting Optional Determinations Pursuant to 1994 PA 451, Part 201, as amended, March 11, 1999.*
3. *ASTM Document: ASTM Practice E 1527-05; "Standard Practice for Environmental Assessments: Phase I Environmental Assessment Process"*
4. *Phase I Environmental Site Assessment, ASTI Environmental, July 8, 2009*

9.0 ATTACHMENTS

- 9.1 Resume of Donald Penniman
- 9.2 Assessing Information and Legal Description
- 9.3 Site Photographs
- 9.4 Phase I ESA, July 8, 2009
- 9.5 Material Safety Data Sheets (MSDS)
- 9.6 Soil Boring Logs
- 9.7 Analytical Results – Groundwater Samples
- 9.8 Analytical Results –Soil Samples

Tables

Table 1
Intended Hazardous Substance Use

546 N. Mechanic Street
Jackson, Michigan

MSDS Ingredients		
Product	Chemical Ingredients	CAS #
Super S Motor Oil SAE 5W-30	Highly-refined petroleum lubricant oils Zinc Compounds NOS	Mixture 25103-54-2
Super S Multipurpose D/M ATF Automatic Transmission Fluid	Highly refined mineral oils Additives	Mixture
SuperSyn Gear Oil 75W-140 Gear Oil	Highly-refined petroleum lubricant oils	Mixture
Super SR&O Hydraulic Oil	Petroleum Distillates (hydrotreated light paraffinic) Additives	64742-55-8
Super SR&O Hydraulic Oil ISO 68	Petroleum Distillates (hydrotreated light paraffinic) Additives	64742-55-8
Super S Gear Oil SAE 80W-90 LS Gear Oil	Highly-refined petroleum lubricant oils	Mixture
Super S Universal Antifreeze Antifreezeze	Ethylene glycol Additives Dye Water	107-21-1 7732-18-5
Super S Extended Life Antifreeze Antifreezeze	Ethylene glycol Additives Dye Water	107-21-1 7732-18-5
Super S Mineral Spirits Solvent	Stoddard Solvent	8052-41-3
Acetone Solvent	Acetone	67-64-1
DuPont SUVA 134a Refrigerant Air Conditioning Refrigerant	1,1,1,2-Tetrafluoroethane	811-97-2

Table 1
Intended Hazardous Substance Use

546 N. Mechanic Street
Jackson, Michigan

Other Hazardous Substances		
Chemical/Product Group	Chemicals	CAS #
Refined Petroleum Products	Refined Petroleum Oils	64741-89-5
	Diesel Fuel	68476-34-6
	Gasoline	8006-61-9
	Petroleum Distillates (hydrotreated heavy naphthenic)	64742-52-5
	Petroleum Distillates (hydrotreated heavy paraffinic)	64742-54-7
Volatile Organic Compounds	Mineral spirits	64475-85-0
	Benzene	71-43-2
	Toluene	108-88-3
	Ethylbenzene	100-41-4
	Xylenes	1330-20-7
	1,2,3-Trimethylbenzene	526-73-8
	1,2,4-Trimethylbenzene	95-63-6
	1,3,5-Trimethylbenzene	108-67-8
	Methyl tertiary butyl ether	1634-04-4
	t-Amyl methyl ether	994-05-8
	Diisopropyl ether	108-20-3
	Ethyl tertiary butyl ether	637-92-3
	n-Butylbenzene	104-51-8
	sec-Butylbenzene	135-98-8
	n-Propylbenzene	103-65-1
	2-Methylnaphthalene	91-57-6
	Naphthalene	91-20-3
	Butane	106-97-8
	Pentane	109-66-0
	Hexane	110-54-3
Polynuclear Aromatic Compounds	Cyclohexane	110-82-7
	Heptane	142-82-5
	Acenaphthene	83-35-9
	Acenaphthylene	208-96-8
	Anthracene	120-12-7
	Benzo(a)anthracene	56-55-3
	Benzo(a)pyrene	50-32-8
	Benzo(b)fluoranthene	205-99-2
	Benzo(k)fluoranthene	207-08-9
	Benzo(g,h,i)perylene	191-24-2
	Chrysene	218-01-9
	Dibenzo(a,h)anthracene	537-00-3
	Fluoranthene	206-44-0
	Indeno(1,2,3-cd)pyrene	193-39-5
	Phenanthrene	85-01-8
Metals	Pyrene	129-00-0
	Cadmium	7440-43-9
	Chromium	16065-83-1
	Lead	7439-92-1
	Lithium	7439-93-2
Inorganic Chemicals	Zinc	7440-66-6
	Sulfur	7704-34-9

Table 2

546 N. Mechanic Street
Jackson, Michigan

Groundwater Analytical Results
(All concentrations in micrograms per liter (ug/L))

Analytical Parameters	Part 201 Generic Residential Criteria						PA-GW-GP-6	PA-GW-GP-8	PA-GW-GP-9	PA-GW-GP-10	PA-GW-GP-11	PA-GW-GP-12	PA-GW-GP-13	PA-GW-GP-14
	Chemical Abstract Service Number	Reporting Limits (ug/kg)	Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Groundwater Contact Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria								
Sample Date							11/5/09	11/5/09	11/5/09	12/15/09	12/15/09	12/15/09	12/15/09	12/15/09
Screen Depth							8.5'	11'	9'	12'	12'	12'	10'	8.5'
VOCs														
Benzene (I)	71432	1	5.0 (A)	200 (X)	11,000	5,600	ND	300	5	2	ND	ND	ND	ND
Ethylbenzene (I)	100414	1	74 (A)	18	170,000 (S)	110,000	ND	1,400	110	130	ND	ND	ND	ND
Methyl-t-butyl-ether (MTBE)	1634044	5	40 (E)	730 (X)	610,000	47,000,000 (S)	ND	ND	ND	ND	ND	ND	ND	ND
Toluene (I)	108883	1	790 (E)	140	530,000 (S)	530,000 (S)	2	81	34	4	ND	ND	ND	ND
1,2,3-Trimethylbenzene	526738	1	63 (E)	17	56,000 (S)	56,000 (S)	ND	1,200	90	130	ND	ND	1	ND
1,2,4-Trimethylbenzene (I)	95636	1	63 (E)	17	56,000 (S)	56,000 (S)	ND	470	210	220	ND	ND	ND	ND
1,3,5-Trimethylbenzene (I)	108678	1	72 (E)	45	61,000 (S)	61,000 (S)	ND	660	67	110	ND	ND	ND	ND
2-Methylnaphthalene	91576	5	260	940 (X)	25,000 (S)	ID	ND	360	15	54	ND	ND	ND	ND
Naphthalene	91203	5	520	13	31,000 (S)	31,000 (S)	ND	680	59	45	ND	ND	ND	ND
n-Butylbenzene	104518	1	80	ID	5,900	ID	ND	100	17	ND	ND	ND	ND	ND
Isopropylbenzene	98828	1	800	ID	56,000 (S)	56,000 (S)	ND	190	15	27	ND	ND	ND	ND
n-Propylbenzene	103651	1	80	ID	15,000	ID	ND	240	29	ND	ND	ND	ND	ND
p-Isopropyltoluene	99876	1	NC	NC	NC	NC	ND	ND	3	ND	ND	ND	ND	ND
sec-Butylbenzene	135988	1	80	ID	4,400	ID	ND	57	3	-	-	-	-	-
Tetrahydrofuran	109999	5	95	11,000 (X)	1,600,000	6,900,000	ND	ND	10	ND	ND	ND	ND	ND
Xylenes (I)	1330207	3	220 (A)	35	190,000 (S)	190,000 (S)	ND	2,800	430	67	ND	ND	ND	ND
Metals														
Arsenic	7440382	1	10	150(X)	4,300	NLV	3	ND	ND	-	-	-	-	-
Chromium	16065831	5	100 (A)	(G,X)	290,000,000	NLV	9	ND	ND	-	-	-	-	-
Lead	7439921	3	40 (A)	(G,X)	ID	NLV	17	15	ND	37	26	15	ND	26
Inorganics														
Cyanide	57125	5	200 (A)	5.2	57,000	NLV	7	ND	ND	ND	ND	ND	ND	ND

Notes:

All samples were analyzed by Brighton Analytical LLC

Concentrations have been compared with P.A. 451, Part 201 Generic Residential Criteria RRD Operational Memorandum #1 (January 23, 2006).

Shaded values indicate concentrations which exceed one or more Part 201 Criteria and statewide default background levels if appropriate.

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(E) Criterion is the aesthetic drinking water value.

(G) Groundwater / Surface Water Interface criterion depends on pH and/or hardness of receiving water body

(I) Hazardous substance may exhibit the characteristic of ignitability.

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(X) The groundwater surface water interface criterion shown is not protective for surface water used as a drinking water source.

NA Not available or not applicable.

NC No criteria have been established for this compound

ND Concentrations were below the detection limit.

- Substance not analyzed in this sample.

Table 3

546 N. Mechanic Street
Jackson, Michigan

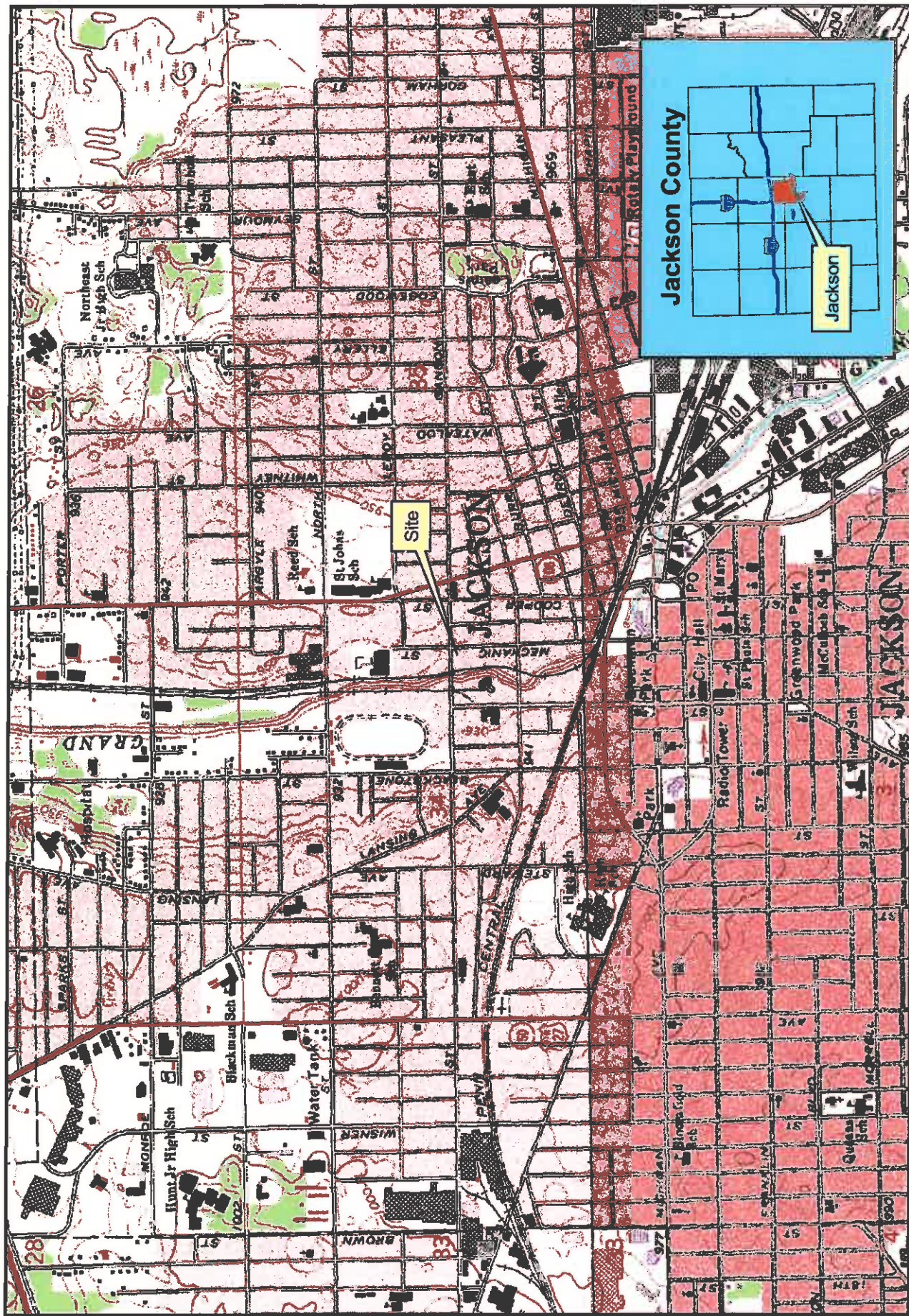
Soil Analytical Results
(All concentrations in micrograms per kilogram (ug/kg))

Analytical Parameters	Part 201 Generic Residential Criteria							Soil Samples				
	Chemical Abstract Service Number	Reporting Limits (ug/kg)	State Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Direct Contact Criteria	Soil Volatilization to Indoor Air Criteria	PA-SB-GP-1	PA-SB-GP-2	PA-SB-GP-3	PA-SB-GP-4	PA-SB-GP-7
Sample Depth (in feet)								1-2'	2-3'	2-4'	2.5-4.5'	11-12'
Sample Date								11/5/09	11/5/09	11/5/09	11/5/09	11/5/09
VOCs												
Tetrachloroethene	127184	50		100	900 (X)	88,000	11,000	ND	ND	110	ND	ND
Metals												
Arsenic (B)	7440382	100	5,800	4,600	70,000 (X)	7,600	NLV	-	8,700	12,000	8,100	14,000
Chromium (B, H)	16065831	500	18,000	30,000	3,300	2,500,000	NLV	-	8,700	6,100	11,000	5,300
Lead (B)	7439921	1,000	21,000	700,000	(G,X)	400,000	NLV	-	40,000	9,600	100,000	25,000
Selenium (B)	7782492	200	410	4,000	400	2,600,000	NLV	-	400	420	330	2,000
Silver (B)	7440224	100	1,000	4,500	100 (M); 27	2,600,000	NLV	-	ND	ND	110	ND

Notes:

- All samples were analyzed by Brighton Analytical LLC using various methods.
Concentrations have been compared with P.A. 451, Part 201 Generic Residential Criteria RRD Operational Memorandum #1, (January 23, 2006).
Shaded values indicate concentrations which exceed one or more Part 201 Criteria and statewide default background levels if appropriate.
- (B) Statewide default background levels for inorganics may be substituted if higher than the criteria.
(D) Calculated criterion exceeds 100%, criteria reduced to 100% or 1,000,000,000 ug/kg.
(G) The GSI value is pH or water hardness dependent.
(H) If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI.
(M) Calculated criterion is below the analytical detection limit (TDL), therefore, the criterion defaults to the TDL.
(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons (PNAs) were developed using "relative potential potencies" to benzo (a) pyrene.
(X) The groundwater surface water interface criterion shown is not protective for surface water used as a drinking water source.
(Z) Mercury is typically measured as total mercury.
- NLL = Hazardous substance is not likely to leach under most soil conditions.
NLV = Hazardous substance is not likely to volatilize.
NA =Not available or not applicable.
ND = Not detected at or above the Method Detection Limit (MDL). Raised detection limits were required for samples that required dilution.
ID = Inadequate data to develop criterion.
= Parameter was not analyzed in this sample.

Figures



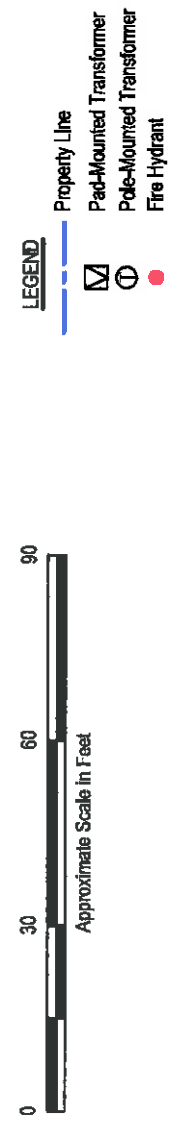
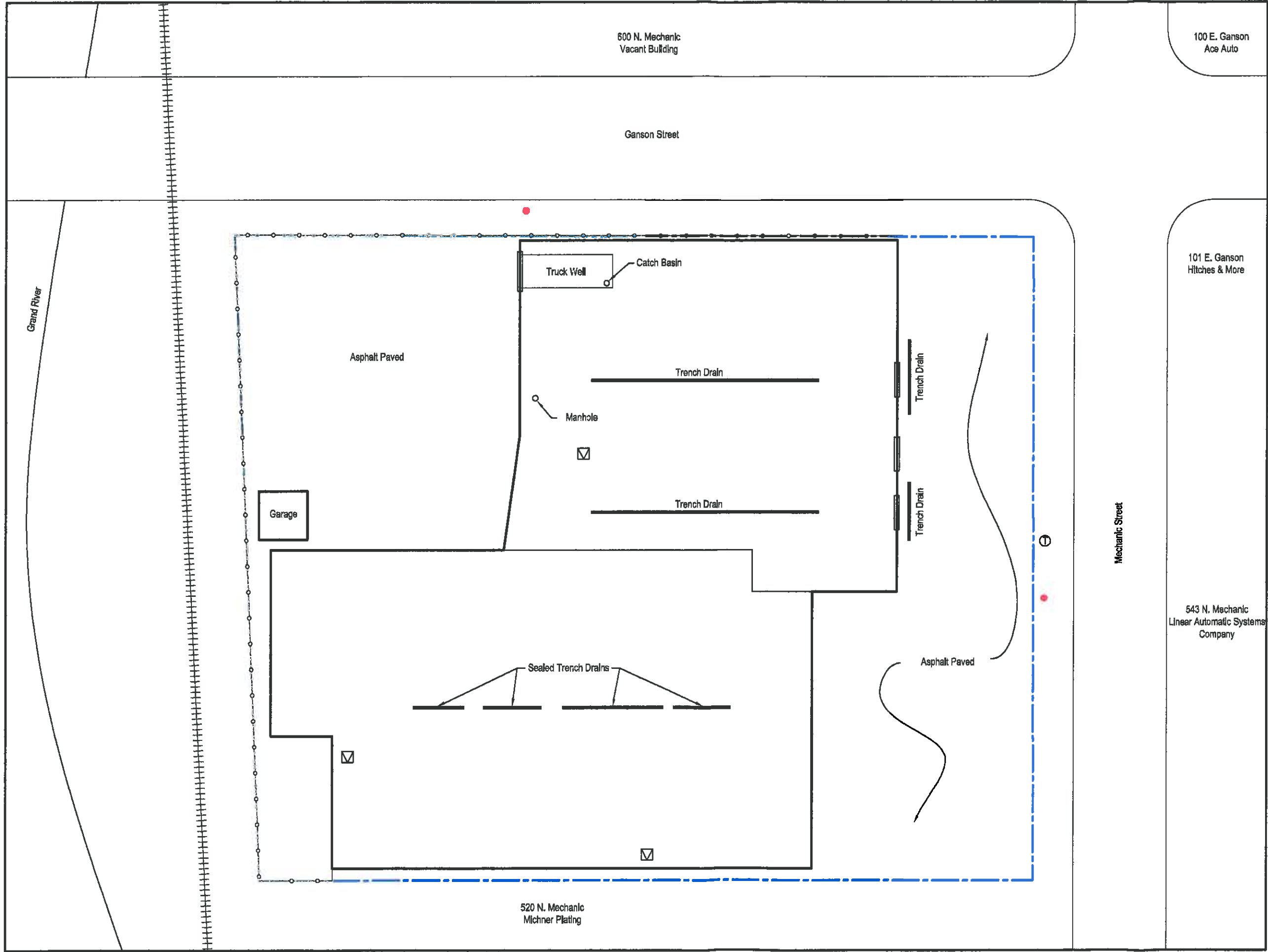
2,000 Feet

2,000 1,000 0

546 N. Mechanic St. Jackson, MI

Created for: Performance Automotive Inc.
 Created by: AGS, June 26, 2009, ASTI Project 6715-15

Figure 1 - Site Location Map





Attachment 9.1

Resume of Donald Penniman

RESUME

ASTI ENVIRONMENTAL



DONALD E. PENNIMAN, CPG
Director Western Great Lakes Office / Senior Hydrogeologist

PROFILE

Certifications / Training

Certified Professional Geologist #10147, American Institute of Professional Geologists
Certified Underground Storage Tank Professional #76, Michigan Department of Environmental Quality
OSHA HAZWOPER 40 Hour Training
Asbestos Building Inspector
Lead Inspector

Education

Hope College, B.A., Geology
Western Michigan University, Graduate Studies in Geology

Experience History

Senior Hydrogeologist, ASTI ENVIRONMENTAL
Senior Geologist/Project Manager, BLDI, Inc.
Senior Hydrogeologist, Warzyn, Inc.
Hydrogeologist, Jacobs Engineering Group
Geologist, Environmental Science and Engineering, Inc.
Geologist, EDI Engineering and Science (now EarthTech)
Assistant Geologist, Wilkins and Wheaton Engineering Company
Research Assistant, Department of Geology, Western Michigan University

Professional Memberships and Service

American Institute of Professional Geologists

Professional Background

Mr. Penniman has extensive experience in environmental investigations in midwestern, western, and southern states. These projects have included Phase I and Phase II Environmental Site Assessments, Baseline Environmental Assessments, and hydrogeological investigations for U.S. EPA Superfund sites, U.S. Department of Defense sites, and U.S. Department of Energy sites. Recent projects have focused on assisting business clients, legal counsel, and lenders in resolving environmental issues and operating successful businesses. Mr. Penniman has served as an expert witness in litigation involving environmental contamination and resource utilization.

Years Experience:

7 --- ASTI ENVIRONMENTAL
22 --- other firms, government

HYDROGEOLOGICAL INVESTIGATIONS

Permit for 183 Acre Lake, Gravel Mining

Completed hydrogeologic investigations for lake permit application for sand gravel mining operation near Manchester, Michigan. Operation used dragline equipment to remove sand and gravel below the water table. Issues were impacts to Pleasant Lake less than one half mile away, and protection of state-regulated wetlands on owner's property.

Analyzed hydrogeologic data, prepared reports, and presented to Michigan Department of Environmental Quality, resulting in issuance of state lake permits and local special use permits.

Pleasant Lake residents challenged the permit by requesting a Contested Case Hearing. Prepared exhibits and additional facts to company counsel to defend permit. Residents settled, withdrew Contested Case

Cause of Water Level Drop, Pond Lily Lake

Determined cause of significant drop in water levels in Pond Lily Lake, Waterloo, Michigan. Riparian owners were unable to use boats.

Analyzed surface water and groundwater catchment areas and evaluated water use of nearby sand and gravel mining operation. Used monitor well network and surface water elevation data from lakes to determine groundwater flow directions. Estimated groundwater inflows and outflows of Pond Lily Lake. Concluded that loss of water in lake was due to natural variations and impact of unusually low precipitation in preceding three years.

Impact of Mining Proposal on Wetland and Wells

Completed hydrogeologic investigations in support for lake permit application for sand gravel mining operation in Clinton, Michigan. Determined impacts to regulated wetland on adjacent property.

Verified soil properties preventing expected groundwater changes from reaching neighbor's wetland. Demonstrated that existing mining operation was not responsible for water level changes in nearby domestic wells.

Impact of Dewatering for Mining on Wetland

Completed hydrogeologic investigation of seasonal dewatering for mining sand and gravel in Allegan County, Michigan. Surveyed elevations of worst-case dewatering and compared them to water levels in regulated wetland.

Concluded wetland was perched in a clay unit and not hydraulically connected to the zone affected by dewatering. Furnished confidential report to owner.

Impact of Lake Creation on Nearby Phreatic Divide

Completed sensitivity analysis using cone of depression scenarios to show that lake expansion by mining at Washtenaw County location would not change location of groundwater divide and would not affect discharges of groundwater to creeks.

Groundwater Assessment, Limestone Quarry

Completed hydrogeologic investigations for proposed expansion of quarry feeding Portland cement manufacturing plant in Dundee, Michigan. Determined maximum extent of cone of depression from current operations. Predicted maximum extent of influence from proposed expansion. Estimated lake levels in quarry at end of mining.

Developed monitor well network with staff; observed and supervised drilling of monitor wells. Assisted company with development of groundwater protection program to indemnify residents on private wells near the quarry.

Hydrogeologic Studies, Radioactive Waste Site

Lead hydrogeologist for former uranium processing and disposal sites under U.S. Department of Energy administration. Project site located in eastern Missouri overlying a fractured limestone aquifer.

Responsible for extensive hydrogeologic studies including monitoring wells, pumping tests in a low-yield formation, and groundwater tracer tests. Developed unique conceptual model and presented remediation approaches to U.S. Department of Energy, U.S. Geological Survey, U.S. Environmental Protection Agency, Missouri Department of Natural Resources, national laboratory scientists, and public interest groups.

DUE DILIGENCE FOR PROPERTY TRANSFERS

Site Investigations, Real Estate Transfers

Conducted numerous investigations of green and brown sites to determine the presence of environmental contamination prior to purchase or refinance. These studies included undeveloped land, abandoned facilities, and active manufacturing plants. Investigative techniques included waste identification, groundwater sampling, subsurface sampling, ground-penetrating radar, and magnetometer.

Soil and Groundwater Investigation, Adrian, Michigan

Managed comprehensive investigation funded by U.S. EPA grant to City of Adrian. Developed project Quality Assurance Project Plan (QAPP) for all studies necessary at Buckeye Plating facility. Determined soil and groundwater sampling programs from evaluation of property history. Project ongoing.

Baseline Environmental Assessments

Conducted and directed numerous Baseline Environmental Assessments (BEAs) in west Michigan. Sites have included manufacturing plants, gasoline stations, dry cleaners, and a former pesticide packaging plant. Assisted clients and legal counsel in Category N, D, and S BEAs for property purchases and foreclosures. These sites included new property uses with no hazardous substance use and continued uses of properties with continued hazardous substance use. Succeeded in obtaining favorable determinations from the Michigan Department of Environmental Quality for BEAs and due care plans.

UNDERGROUND STORAGE TANKS

Remedial Investigations, Underground Tanks (USTs)

Conducted investigations of soil and groundwater contamination from leaking USTs. Defined \ the problem, located and isolated contaminated materials, soil and free product removal and disposal, and post remedial action monitoring. Hydrogeologic environments included glacial outwash plains, clay tills, and fractured limestone aquifers. Obtained closure from the Michigan Department of Environmental Quality for numerous sites.

Numerous UST Removals and Closure Reports

Developed specifications for contractor and estimated costs for removal and closure for owners. Filed required notices with DEQ before removal. Supervised contractors in tank removals; managed disposal of tank liquids and impacted soils. Developed supplemental investigations of releases visible in excavation. Prepared closure reports required by DEQ on behalf of owners.

Expert Witness and Litigation Support

Served as expert witness assisting plaintiff's attorney in litigation involving excess groundwater pumpage on an adjoining property that affected plaintiff's ponds. Case was settled in favor of the plaintiff.

Provided litigation support for third-party litigation involving groundwater contamination. This situation included multiple potential contaminant sources and multiple third-party plaintiffs and defendants.

PUBLICATIONS/PRESENTATIONS

Carman, Jeffrey, and Penniman, Donald, "Aquifer Testing in a Fractured Limestone Aquifer" U.S. Department of Energy, Weldon Spring Site Technical Conference, 1990

Penniman, Donald, and VanWagner, Elmer, "Advantages of Dual-Tube Air-Rotary Drilling Techniques", Geological Society of America Regional Conference, Toledo, Ohio, 1991

AWARDS

Michigan Chamber of Commerce *Environmental Quality Award* – Underground Storage Tank Removals, Investigation, and Remediation for the Former Action Auto Sites.

CONTACT INFORMATION

Mr. Penniman can be reached at ASTI Environmental (ASTI), 660 Cascade West Parkway, Suite 210, Grand Rapids, Michigan 49546, or by calling 616.957.5601 (Toll-Free 800.395.ASTI). His email address is dpenniman@asti-env.com. More information about ASTI is available on the web at www.asti-env.com.

Attachment 9.2

Assessing Information & Legal Description

General Property Information

[Back to Non-Printer Friendly Version] [Send To Printer]

Parcel: 1-015100000 Data Current As Of: 1:34 AM 6/26/2009

Property Address

[collapse]

546 N MECHANIC ST
JACKSON, MI 49201

Owner Information

[collapse]

QUALITY TRANSMISSION PARTS PROP LLC
546 N MECHANIC ST
JACKSON, MI 49201

Unit: 50

Taxpayer Information

[collapse]

SEE OWNER INFORMATION

General Information for Tax Year 2009

[collapse]

Property Class:	301	Assessed Value:	\$224,900
School District:	38170 - JACKSON PUBLIC	Taxable Value:	\$224,900
State Equalized Value:	\$224,900	Map #	N/A
User Number Indx:		Date of Last Name Chg:	N/A

Date Filed:

Principal Residence Exemption
(2009 May 1): 0.0000 %

Principal Residence Exemption
(2009 Final): 0.0000 %

Previous Year Info	MBOR Assessed	Final S.E.V.	Final Taxable
2008	\$309,400	\$309,400	\$309,400
2007	\$318,150	\$318,150	\$318,150

Land Information

[collapse]

Acreage:	1.56	Frontage:	0.00 Ft.
Zoning Code:	I-1	Depth:	0.00 Ft.
Land Value:	\$47,600	Mortgage Code:	
Land Improvements:	\$16,032	Lot Dimensions/Comments:	N/A
Renaissance Zone:	NO		

Legal Information for 1-015100000

[collapse]

COM AT SW COR OF GANSON & MECHANIC ST TH W ALG S LN OF GANSON ST TO E BANK OF GRAND RIVER TH SLY ALG ELY BANK OF GRAND RIVER 227.04 FT TO N LN OF NOVELTY MFG CO LAND TH E ALG N LN OF NOVELTY MFG CO LAND TO W LN OF MECHANIC ST TH N ALG W LN OF MECHANIC ST TO POB EX R/W OF JL & S RR BEING PART OF BLK 12 BLACKMAN'S ADD & LAND LYING BETWEEN BLK 12 & RIVER NE 1/4 SE 1/4 SEC 34 T2S R1W BLACKMAN'S ADD

Sales Information

2 sale record(s) found.

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms Of Sale	Liber/Page
-----------	------------	------------	---------	---------	---------------	------------

08/23/2002 \$700,000.00 WD	KTD LIMITED	QUALITY TRANSMISSION PARTS PROP LLC	ARMS- LENGTH	1707-216
10/03/1991 \$435,000.00 LC	DANIEL L JACOB CO INC	K.T.D. LTD	ARMS- LENGTH	1642-1103

Building Information

2 building(s) found.				
Description	Floor Area	Yr Built	Est. TCV	
<input checked="" type="checkbox"/> Commercial/Industrial Building 1 - <i>Industrial, Light Manufacturing</i>	31551 Sq. Ft.	1972	\$380,884	
General Information				
Floor Area:	31551 Sq. Ft.	Estimated TCV:	\$380,884	
Occupancy:	Industrial, Light Manufacturing	Class:	S	
Stories Above Ground:	1	Average Story Height:	18	
Basement Wall Height:	N/A			
Year Built:	1972	Year Remodeled:	0	
Percent Complete:	100%	Heat:	Space Heaters, Gas with Fan	
Physical Percent Good:	49%	Functional Percent Good:	100%	
Economic Percent Good:	75%	Effective Age:	31 yrs.	
<input checked="" type="checkbox"/> Residential Building 1	0 Sq. Ft.	0	\$5,354	
General Information				
Floor Area:	0 Sq. Ft.	Estimated TCV:	\$5,354	
Garage Area:	324 Sq. Ft.	Basement Area	0 Sq. Ft.	
Foundation Size:	0 Sq. Ft.			
Year Built:	0	Year Remodeled:	0	
Occupancy:	Single Family	Class:	C	
		Tri-Level?:	NO	
Percent Complete:	100%	Heat:	Forced Air w/ Ducts	
AC w/Separate Ducts:	NO	Wood Stove Add-on:	NO	
Bedrooms:	0	Water:	N/A	
Style:	TRADITIONAL	Sewer:	N/A	
Area Detail - Basic Building Areas				
Height	Foundation	Exterior	Area	Heated
Area Detail - Overhangs				
Height	Exterior	Area	Included in Size for Rates	
Basement Finish				
Recreation:	0 Sq. Ft.	Percent Good:	0	
Living Area:	0 Sq. Ft.	Percent Good:	0	
Walk Out Doors:	0	No Concrete Floor Area:	0 Sq. Ft.	
Plumbing Information				
3-Fixture Baths:	1			
Garage Information				

Garage # 1

Area:	324 Sq. Ft.	Exterior:	Siding
Foundation:	18 Inch	Common Wall:	Detached
Year Built:		Finished?:	NO
Auto Doors:	0	Mech Doors:	0

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[Privacy Policy](#)

Attachment 9.3
Site Photographs

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 1. View of the Property facing northwest from Mechanic Street



Photo 2. View of the northwest portion of the Property facing southeast

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley



PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 3. Interior view of the office area



Photo 4. View of sealed trench drains in the southern portion of the Property

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 5. View of staining around the catch basin in the northwest portion of the subject building



Photo 6. View of the garage on the northwestern portion of the Property

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley



PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 7. Interior view of the garage

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley

ASTi
ENVIRONMENTAL

Attachment 9.4

Phase I ESA, July 8, 2009

Phase I Environmental Site Assessment
546 N. Mechanic Street
Jackson, Michigan

Performance Automotive, Inc.

July 8, 2009

ASTI ENVIRONMENTAL



Phase I Environmental Site Assessment
546 N. Mechanic Street
Jackson, Michigan

July 8, 2009

Report Prepared For:


Performance Automotive, Inc.
3300 E. Michigan Avenue
Jackson, Michigan 49202

Report Prepared By:

ASTI Environmental
660 Cascade West Parkway SE, Suite 210
Grand Rapids, Michigan 49546
1-800-395-ASTI


ASTI Project No. 6715-15

Report Prepared by:



Shawn L. Shadley, EP
Environmental Scientist

Report Reviewed by:



Donald E. Penniman, CPG
Director – Western Great Lakes



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- L** DEQ RRD Perfected Lien List (3-24-09)
- M** Aerial Photographs (1950, 1960, 1970, 1980, 1986, 1991, 1996, and 2000)
- N** Sanborn Maps (1886, 1893, 1899, 1907, 1930, 1950, 1980, and 1990)
- O** City Directories (1955, 1965, 1975, 1985, 1997, 2002, and 2008)

Executive Summary

ASTI Environmental (ASTI) was retained by the City of Jackson, on behalf of Performance Automotive, Inc., to conduct a Phase I Environmental Site Assessment (ESA) of 546 N. Mechanic Street in Jackson, Jackson County, Michigan (Property). The ESA was conducted in accordance with ASTM Practice E 1527-05. The information and opinions rendered in this report are exclusively for reliance by Performance Automotive, Inc. and the City of Jackson, and ASTI will not distribute or publish this report without the consent of Performance Automotive, Inc. and the City of Jackson, except as required by law or court order. The services provided by ASTI in completing this assessment have been provided in a manner consistent with the normal standards of the profession. No other warranties, expressed or implied, are made. This Phase I ESA is to be used by Performance Automotive, Inc. for a pending real estate transaction.

The Phase I ESA included (1) a site inspection on June 25, 2009, (2) interviews with knowledgeable site contacts, (3) review of pertinent Jackson County, City of Jackson, and Michigan Department of Environmental Quality (DEQ) records, (4) acquisition and review of a federal and state database search, and (5) review of historical aerial photographs, Sanborn maps, and city directories.

No testing or sampling of materials (for example, soil, water, and air) was included in this assessment. Access to the Property was not limited at the time of the assessment. A lack of lighting inside the subject building was considered a limitation in evaluating Property conditions.

Data gaps encountered during the investigation include a lack of user provided information, lack of an interview with the prior owners of the Property, and the inability to identify the first developed use of the Property. Based on the known prior use of the Property, these data gaps are not considered to be data failure.

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 of 546 N. Mechanic Street in Jackson, Jackson County, Michigan, referred to as the "Property". Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions (REC) in connection with the Property, except for:

- the historical use of the Property for industrial operations that included a machine shop, automotive repair, and enameling, lacquer spraying, and saw tooth polishing operations;
- antifreeze observed in a catch basin in the northern portion of the subject building;
- containers of oils and fuel observed in the northern portion of the subject building;
- sealed trench drains observed in the southern portion of the subject building;
- the Property's listing as a LUST site and BEA site; and
- the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

With regard to the containers of oils and fuel observed in the northern portion of the subject building, ASTI does not recommend a subsurface investigation with regard to these materials. ASTI recommends that the containers and their contents be properly removed and disposed.

ASTI recommends a subsurface investigation with regard to the listed RECs to determine if the Property's natural resources have been impacted from the historical use of the Property for industrial operations and the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

1.0 INTRODUCTION

ASTI Environmental (ASTI) was retained by the City of Jackson, on behalf of Performance Automotive, Inc., to conduct a Phase I Environmental Site Assessment (ESA) of 546 N. Mechanic Street in Jackson, Jackson County, Michigan (Property). The ESA was conducted in accordance with the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (E 1527-05).

1.1 Purpose

The assessment was conducted to identify recognized environmental conditions (RECs) associated with the historical uses of the Property, current site operations, and the condition of surrounding properties. This Phase I ESA is to be used by Performance Automotive, Inc. for a pending real estate transaction.

According to ASTM Practice E 1527-05, the term *recognized environmental condition* means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions. A *historical recognized environmental condition* is defined as an environmental condition which in the past would have been considered to be a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.

1.2 Detailed Scope of Services

Information required to complete the ESA was obtained from personal interviews and review of practically reviewable and reasonably ascertainable records. Informational sources include the following:

- interviews with personnel from (a) the City of Jackson municipal offices, and (b) Jackson County;
- completion of a user questionnaire by a representative of Performance Automotive Inc.;
- available records maintained by the City of Jackson Assessing, Building, and Fire Departments, the Jackson County Environmental Health Department, and the DEQ;
- aerial photographs for the Property as provided by the City of Jackson Engineering Department (1950, 1960, 1970, 1980, and 2000) and the Jackson County GIS Department (1986, 1991, and 1996);
- Sanborn maps for the Property and adjoining properties provided by EDR (1886, 1893, 1899, 1907, 1930, 1950, 1980, and 1990)
- city directories for the Property and adjoining properties maintained by the Library of Michigan (1955, 1965, 1975, 1985, 1997, 2002, and 2007); and
- The EDR Radius Map Report with GeoCheck (6-23-09).

Shawn Shadley, Environmental Professional (EP), inspected the Property on June 25, 2009 and completed the Phase I ESA report. A copy of Mr. Shadley's resume is provided as Appendix A.

1.3 Significant Assumptions

Information obtained during this assessment, to the extent it was relied on to form our opinion, was assumed to be complete and accurate. ASTI cannot be held responsible for the quality or content of information obtained from interviews and standard sources.

1.4 Limitations and Exceptions

The information and opinions included in this report were given in response to a limited scope of work, being a Phase I ESA per ASTM Practice E 1527-05, and should be considered and implemented only in light of that particular scope of work. The services provided by ASTI in completing this assessment have been provided in a manner consistent

with the normal standards of the profession. No other warranties, expressed or implied, are made.

No testing or sampling of materials (for example, soil, water, air) was included in this assessment. No limitations were placed on ASTI's access to the Property. Weather conditions included a partly cloudy sky and temperature of 80°F during the site investigation.

1.5 Special Terms and Conditions

The Phase I ESA was performed in conformance with the scope and limitations of ASTM Practice E 1527-05. No special terms and conditions outside ASTM Practice E 1527-05 have been addressed.

1.6 User Reliance

The Phase I ESA was performed for the benefit of Performance Automotive, Inc. and the City of Jackson, and ASTI acknowledges that both parties may rely on the contents and conclusions presented in this report. ASTI acknowledges the fact that the scope of work was sufficient in ASTI's opinion to uncover, to the extent of ASTI's services, potential environmental liabilities at the Property.

This effort was performed per authorization of Ms. Carol Konieczki, with the City of Jackson. The information and opinions rendered in this report are exclusively for use by Performance Automotive, Inc. and the City of Jackson, and ASTI will not distribute or publish this report without the consent of Performance Automotive, Inc. and the City of Jackson, except as required by law or court order.

Any use a third party makes of this report, or any reliance upon it, or any decisions based on it, is the sole responsibility of the third party. A third party is not afforded the status of a third party beneficiary unless ASTI expressly agrees to such status in writing. ASTI has no responsibility for any damages that may be suffered by a third party as a result of any decision made, or action taken by a third party, based on this report.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Property is located on the southwest corner of East Ganson Street and North Mechanic Street in the southeast ¼ of Section 34, T2S-R1W, City of Jackson, Jackson County, Michigan. A Site Location Map is provided as Appendix B. The Property consists of a single parcel assigned parcel number 1-015100000. A copy of the current assessing record for the Property, obtained from the City of Jackson Assessing Department, is provided as Appendix C.

2.2 Site and Vicinity General Characteristics

The Property is improved with light industrial building with asphalt-paved parking lots on the east and west side of the Property, a grass area along the southern portion of the Property, and concrete-paved sidewalks along the north and east portions of the Property. The adjoining properties consist primarily of commercial and industrial land use. A Site Features Map is included as Appendix D.

ASTI reviewed a copy of the City of Jackson Zoning Map on July 5, 2009. According to the zoning map, the Property is zoned I-1, Light Industrial. Photographs of the Property and adjoining properties were taken during the site inspection and are provided as Appendix E.

2.3 Current Use of the Property

The Property is currently vacant.

2.4 Descriptions of Structures, Roads, Other Improvements on the Site

The Property consists of a single parcel totaling 1.56 acres in size. A 31,554 square-foot industrial building occupies the Property. In addition, a 324 square-foot garage is located on the northeast portion of the Property. Asphalt-paved parking areas are located on the eastern and western portions of the Property. A narrow grass strip area is located on the southern portion of the Property. The Property is accessed from the east off of N. Mechanic Street and from the north off of E. Ganson Street. Cyclone fencing is located along the northern and western portions of the Property. The industrial building was constructed with a concrete slab foundation, steel beams, trusses, and roofing, poured concrete walls, brick and steel siding. Interior finishing materials observed included carpet, 2'x4' and 1'x1' ceiling tile, wood paneling, ceramic tile, 12"x12" resilient floor tile (RFT), drywall, fluorescent

lighting, and glass.

The garage building was constructed with a wood frame, asphalt shingle roofing, concrete slab foundation, and vinyl siding.

Municipal water and sewer is provided to the Property via the City of Jackson. Sanitary wastewater is discharged to the City of Jackson sanitary sewer system. Consumers Energy provides natural gas and electrical services to the Property. According to the Consumers Energy SIMs gas record for the Property, natural gas was connected to the subject building in 1973. A copy of the gas record card is provided in Appendix F. Natural gas is used for fueling suspended gas heaters, forced-air furnaces, and water heaters located in the subject building.

2.5 Current Uses of Adjoining Properties

ASTI observed adjoining properties during the site inspection to evaluate the potential risk these properties may pose to the Property. Observations were made from the Property and public access areas, as appropriate. Each is described as follows.

North	Vacant industrial building located at 600 N. Mechanic Street
South	Michner Plating located at 520 N. Mechanic Street
West	A railroad line with the Grand River beyond
East	Hitches & More at 101 E. Ganson, Ace Auto at 100 E. Ganson, and Linear Automatic Systems Company at 543 N. Mechanic

No chemical storage, stained areas, stressed vegetation, or signs of material spillage were observed along the property lines between the Property and adjoining properties. No USTs, ASTs, pits, ponds, or lagoons were observed on the adjoining properties.

3.0 USER PROVIDED INFORMATION

A representative from Performance Automotive, Inc. with the City of Jackson completed a User Questionnaire on June 24, 2009. A copy of the User Questionnaire is provided as Appendix G.

3.1 Title Records

Performance Automotive, Inc. has not provided ASTI with title records for the Property or requested that ASTI obtain title records.

3.2 Environmental Liens or Activity and Use Limitations

Performance Automotive, Inc. has not provided ASTI with any information regarding environmental liens or activity and use limitations on the Property.

3.3 Specialized Knowledge

The representative from Performance Automotive, Inc. stated they do not have any specialized knowledge or experiences related to the Property or nearby properties, nor is he involved in the same line of business as the current or former occupants of the Property or an adjoining property.

3.4 Commonly Known or Reasonably Ascertainable Information

The representative from Performance Automotive, Inc. stated that they are aware of commonly known or reasonably ascertainable information about the Property that would help ASTI to identify conditions indicative of releases or threatened releases. However, no information was provided.

3.5 Valuation Reduction for Environmental Issues

ASTI has not been provided with an appraisal for the Property. The representative from Performance Automotive, Inc. stated that the purchase price reasonably reflects the fair market value of the Property.

3.6 Owner, Property Manager, and Occupant Information

Refer to Section 6.0.

3.7 Reason for Performing Phase I ESA

The purpose of this Phase I ESA was to identify existing or potential recognized environmental conditions (as defined by ASTM Standard E-1527-05) in connection with the

Property. ASTI understands that the findings of this study will be used to support a pending Property transaction.

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

ASTI ordered a government records search for the Property from Environmental Data Resources, Inc. (EDR) in Milford, Connecticut. A copy of the EDR Radius Map Report with GeoCheck®, dated June 23, 2009, is included in Appendix H. A description of the databases, search distances, and results are presented in the report.

4.1.1 Federal Databases

The Property is included on the researched federal environmental databases as a RCRA-SQG site, which is discussed below.

National Priorities List

No National Priorities List (NPL) sites were identified within a 1-mile radius of the Property (Appendix H). No delisted NPL sites were identified within a ½-mile radius of the Property (Appendix H).

Comprehensive Environmental Response, Compensation, and Liability Information System

No active Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site was identified within a ½-mile radius of the Property (Appendix H).

No CERCLIS-NFRAP (no further remedial action planned) sites were identified within a ½-mile radius of the Property (Appendix H).

Resource Conservation and Recovery Information System

The Property was identified as a RCRA generator site and two RCRA non-generator sites were identified on the adjoining properties (Appendix H). Quality Transmission Parts Company LLC is listed on the Property as a RCRA small quantity generator (SQG) of waste. There were no violations recorded against the site. Since there were no violations and Quality Transmission Parts Company LLC no longer occupies the Property, the Property's listing as a RCRA SQG site represents minimal environmental risk.

Linear Auto-Matics Systems Co is listed on the eastern adjoining property as a RCRA non-generator site. One violation was recorded against the site on June 12, 1986 and achieved compliance on June 30, 1986. The site does not currently generate waste and represents

minimal environmental risk to the Property.

Michner Plating is located on the southern adjoining property and is listed as a RCRA non-generator site. The site has had numerous violations associated with manifesting and container management issues and the site has been historically listed as a RCRA large quantity generator of waste associated with electroplating, plating, polishing, anodizing, and coloring conducted on the site.

One RCRA CORRACTS (corrective action) site was identified within a 1-mile radius of the Property (Appendix H). Eaton Aeroquip is located at 300 S. East Avenue, approximately 0.86 mile southeast of the Property. Based on its distance from the Property, the Eaton Aeroquip RCRA CORRACTS site represents minimal environmental risk to the Property.

Emergency Response Notification System Data

The Property was not identified in the Emergency Response Notification System (ERNS) database (Appendix H).

Federal Institutional Control/Engineering Control Registry

The Property was not identified in any federal institutional control/engineering control registries (Appendix H).

4.1.2 State Databases

The Property was identified in the researched state environmental databases as a closed LUST site, a UST site, and a BEA site, which are discussed below. The Property is not located in an area in which tribal records are applicable.

Hazardous Waste Sites

Fourteen State Hazardous Waste Sites (SHWS) were identified within a 1-mile radius of the Property (Appendix H). In addition, one delisted SHWS was identified within a 1-mile radius of the Property

Map ID B5	Acme Industries	600-626 N. Mechanic Street	Adjoining N
Map ID D14	Department of Military Affairs	100 Armory Court	0.13 mile NNE
Map ID 29	Great Lakes Home Health	900 Cooper St.	0.24 mile NE
Map ID G33	Howards Radiator Service	401 N. Jackson	0.32 mile SSW
Map ID J47	Butterfield Development	110 W. Michigan Avenue	0.48 mile S

Map ID 52	Consumers Energy Headquarters Project Act 381	Francis Street	0.63 mile SSE
Map ID 53	George's Service Center	1135 Cooper	0.64 mile NNE
Map ID 54	Motor State Oil & Grease	155 Hobart	0.67 mile N
Map ID 55	145 W. Monroe	145 W. Monroe	0.73 mile N
Map ID 56	Sam's Iron & Metal	212 W. Monroe	0.76 mile NNW
Map ID 59	Libra Industries of Michigan	1435 N. Blackstone Street	0.88 mile NNW
Map ID 60	Jackson MGP	703 Airline Drive	0.92 mile SSE
Map ID 61	Certaineed Corporation	701 E. Washington Ave.	0.96 mile SE
Map ID K62	MI Dept/Environmental Quality	919 Amur Street	0.99 mile SSE
Map ID K63	Eaton Corp – East Street	300 S. East Street	0.99 mile SSE

ASTI reviewed files for the Acme Industries site at the Michigan Department of Environmental Quality (MDEQ) on June 24, 2009. Based on the files reviewed, numerous volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PNAs) have been identified in the soils beneath the site. In addition, VOCs have been identified in the groundwater located beneath the site. Groundwater flow direction at the site has been determined to flow in an east-northeast direction towards the Grand River. Based on the groundwater flow direction at the site away from the Property, the Acme Industries SHWS represents minimal environmental risk to the Property.

Based on their distances from the Property and/or locations downgradient, with respect to anticipated groundwater flow direction, the listed SHWS sites represent minimal environmental risk to the Property.

No State CERCLIS sites were identified within a ½-mile radius of the Property.

Landfill/Solid Waste Disposal

No Landfill or Solid Waste Disposal sites were identified within a ½-mile radius of the Property (Appendix H).

Leaking Underground Storage Tank List

Thirteen Leaking Underground Storage Tank (LUST) sites were identified within a ½-mile radius of the Property (Appendix H).

Map ID A1	Jack Smith Beverages	546 N. Mechanic Street	Property – closed (2)
Map ID 8	Jackson County Fairgrounds	200 W. Ganson St.	0.11 mile W – closed
Map ID D11	Goodwill Industries of Central Michigan	617 N. Mechanic Street	0.12 mile NNE – closed (2)

Map ID D16	MI Dept/Military & Veterans Affairs	100 Armory Court	0.13 mile NNE – closed (2)
Map ID E24	Jackson Fire Dept.	518 N. Jackson St.	0.16 mile SW – open (2)
Map ID F26	Art Moehn Chevrolet Honda Geo	500 N. Jackson St.	0.18 mile SW – closed (2)
Map ID 31	Airport Limousine Service Inc.	240 W. Trail St.	0.26 mile SW – open
Map ID H35	Commercial Exchange	150 W. North St.	0.33 mile NNW – closed
Map ID 37	William Navarre	317 Oak St.	0.35 mile SSE – open
Map ID 40	Kar Clinic	401 W. Ganson St.	0.39 mile W – closed
Map ID 43	Goodyear Tire Center #5131	224 N. Jackson St.	0.41 mile SSW – closed
Map ID 45	Pearl Street Garage	250 W. Pearl St.	0.45 mile SSW – closed (2)
Map ID 46	Miller's Automotive	500 E. Pearl St.	0.46 mile SE - open

Jack Smith Beverages (Property) is listed as a closed LUST site. Releases were reported from the Property on November 5, 1990 and July 1, 1994. The site was given closure on January 5, 2000. ASTI reviewed a Leaking Underground Storage Tank Closure Report conducted on the Property by MacKenzie Environmental Services, Inc. on November 30, 1999 at the DEQ. During the removal of two 2,000-gallon USTs (diesel and gasoline) in 1990, a release was reported. Free product was encountered in one of the monitor wells (MW-8) installed on the site. Beginning in November 1994, a groundwater extraction system was installed to address the free product. In addition, soil vapor extraction was performed using horizontal wells installed in trenches in the vadose zone. During the installation of the southernmost remediation system trench, a 1,500-gallon leaded gasoline UST was encountered and found to be leaking and was subsequently removed. Groundwater remediation activities continued on the Property until October 1997. A total of ~1,500,000 gallons of groundwater have been treated and ~400 cubic yards of soil have been remediated. Groundwater on the site was determined to flow in a northwesterly direction toward the Grand River.

In 1997-98, MacKenzie Environmental Services, Inc. conducted a subsurface investigation at the site to determine the present concentrations of fuel constituents in the subsurface. A total of 16 borings and two additional groundwater monitor wells were drilled and installed on the Property. In addition, oxygen release compound (ORC) socks were installed in site wells. Soil and groundwater samples collected in 1997-98 exhibited elevated concentrations of gasoline compounds. A restrictive covenant was prepared outlining the area of the parking lot in the northwest corner of the Property as having restrictions. The soil and groundwater under this portion of the Property is prohibited from off-site transport and disposal unless properly characterized to determine disposition requirements. Additionally,

the site is zoned industrial and cannot be changed to residential land use. A partial copy of the report is provided in Appendix I.

Based on their statuses, distance, and/or locations cross gradient/downgradient from the Property, the remaining LUST sites represent minimal environmental risk to the Property.

Registered Underground Storage Tank List

Two underground Storage Tank (UST) sites were identified on the Property and the eastern adjoining property (Appendix H).

The Property is listed as having one 2,000-gallon diesel UST and one 2,000-gallon gasoline UST removed in 1991 and one 1,500-gallon leaded gasoline UST removed in 1994. Releases have been identified with regard to the former USTs as discussed above.

Linear Auto-Matics Systems Co. is listed as having one 3,000-gallon biodegrade/coolant UST removed from the site on May 1, 1998. No indication of a release was reported with regard to the UST. Based on its removal and no reported release, the site represents minimal environmental risk to the Property.

Baseline Environmental Assessments (BEA)

The Property and the eastern adjoining property were identified as BEA sites (Appendix H). A BEA was conducted on the Property by Bradley Environmental Technology, L.C. on August 16, 2002. Two groundwater samples were collected from temporary monitor wells near the northwest corner of the Property. The samples were analyzed for unleaded gasoline parameters. Analytical results indicated gasoline constituents remain in groundwater beneath the site in exceedance of the Part 201 Generic Residential Cleanup Criteria (GRCC). A copy of the BEA is provided in Appendix I.

A BEA was conducted on the eastern adjoining property at 101 E. Ganson Street by STS Consultants on April 3, 1998. A total of five soil borings were completed on the site. One of the borings was converted to a temporary monitor well. Two soil samples were collected (one from the former UST cavity and one from former pump island) and analyzed for gasoline compounds. In addition, one groundwater sample was collected and analyzed for gasoline compounds. Benzene, ethylbenzene, xylenes, toluene, and methyl-tert-butyl-ether (MTBE) were detected in soil beneath the site in exceedance of the Part 201 GRCC.

Groundwater analytical results were non-detect for all compounds. Based on the absence of groundwater contamination, the eastern adjoining properties' listing as a BEA site represents minimal environmental risk to the Property.

Institutional Control/Engineering Control Registries

No institutional control or engineering control registry sites were identified on the Property. However, a restrictive covenant has been filed for the Property restricting land use. The restrictive covenant is included in Appendix I.

Voluntary Cleanup Sites

No voluntary cleanup sites were identified within a ½-mile radius of the Property.

Brownfield Sites

Three Brownfield sites were identified within a ½-mile radius of the Property (Appendix H).

Map ID B6	Hitches & More	101 E. Ganson	Adjoining E
Map ID D12	Goodwill Industries	617 N. Mechanic Street	0.12 mile NNE
Map ID G32	Howards Radiator	N. Jackson St.	0.29 mile SSW

Hitches & More is located on the eastern adjoining property. A prior investigation conducted on the site identified soil contamination associated with a former gas station. Groundwater contamination was not encountered during the investigation. Based on the lack of groundwater contamination, the Hitches & More Brownfield site represents minimal environmental risk to the Property.

Based on their distances from the Property and/or locations downgradient, with respect to anticipated groundwater flow direction, the remaining Brownfield sites represent minimal environmental risk.

4.2 Additional Environmental Record Sources

Michigan Oil & Gas Wells

ASTI found no documentation pertaining to oil and gas wells located on or adjoining the Property.

State, County, and Municipal Records

Information was requested from the Jackson County Health Department (JCHD) regarding

the Property. A response letter dated June 24, 2009 indicates that no records exist for the Property. A copy of the response letter is provided as Appendix J.

ASTI requested information maintained by the Jackson Fire Department for the Property. Based on a review of information received on June 30, 2009, a permit to remove two 2,000-gallon tanks was pulled on September 12, 1990 and a release was reported on November 5, 1990. Copies of the files are provided in Appendix K.

ASTI's review of Property information maintained by the Jackson Assessing and Building Departments did not disclose evidence of any structures, equipment, or events (e.g., hazardous substance storage sheds, underground storage tanks, material releases, explosions, etc.) that would be considered representative of an environmental concern posed to the Property. Building department records indicated a remediation garage was proposed on the Property in 1994. The remediation garage is still present on the Property. According to assessing records, the subject building was constructed in 1971 with building additions in 1979, 1983, and 1987.

The DEQ RRD maintains a listing of properties in the State that have perfected environmental liens. The Property was not included on the list as of the most recent update (Appendix L).

Prior Environmental Investigations

ASTI was not provided with any prior environmental investigations conducted on the Property. A LUST Closure Report and BEA have previously been conducted on the Property and are discussed in Section 4.1.2.

4.3 Physical Setting Sources

A Physical Setting Sources Map, which includes an overlay of the United States Geological Survey (USGS) topographic map (7.5-minute series) for the Jackson South Michigan quadrangle, which includes the Property, is provided in the EDR Report in Appendix H. The Property lies at elevation of approximately 922 feet above mean sea level (MSL). Topography of the Property declines to the south-southwest.

Based on a prior investigation conducted on the Property, groundwater has been encountered ranging from 5'-9' bgs and groundwater flow direction has been determined to be in a

northwesterly direction.

Soil composition information for the Property is included in the EDR Report (Appendix H) on pages A-5 and A-6. The primary soil component is identified as urban land with variable texture. Previous environmental investigations on the Property indicate silty sand fill soils underlain by a silt and clay glacial till.

4.4 Historical Use Information on the Property

To evaluate the historical use of the Property, ASTI (1) reviewed historical aerial photographs, (2) reviewed city directories, (3) reviewed Sanborn maps, and (4) reviewed documentation maintained by the City of Jackson and Jackson County.

4.4.1 Prior Occupancy

Based on the information reviewed, the Property has been occupied by Jackson Paper Company (1886-1893, Michigan Bag & Paper Company (1899-1907), Potter Manufacturing Company (1930), a bottling company (1950), Jack Smith Beverages Inc. (1975-1985), Owen Machine & Tool, Inc. (1997), and Open Machine Systems, Owen Machine & Tool, Inc., and Quality Transmission Parts (2002).

ASTI was unable to identify the first developed use of the Property and was therefore unable to achieve the historical research objectives identified in the ASTM standard even after reviewing the standard historical sources identified in the ASTM standard that were reasonably ascertainable and likely to be useful. However, this data failure is not considered likely to have a material impact upon the findings and conclusions of this report since standard historical sources prior to 1886 are not reasonably ascertainable, and because past experience indicates that such standard historical sources are not likely to be sufficiently useful, accurate, or complete with respect to identifying potential environmental concerns. Therefore this data failure is not considered a significant data gap.

4.4.2 Aerial Photographs

ASTI reviewed available aerial photographs of the Property for the years 1950, 1960, 1970, 1980, 1986, 1991, 1996, and 2000. Copies of the aerial photos are provided as Appendix M. An industrial building is evident on the Property in the 1950 and 1960 aerial photographs. The southern portion of the building appears to have been removed in the 1970 aerial photograph. The building has been removed and two new buildings are evident on the

Property in the 1980 aerial photograph. A building addition connecting the two buildings and an addition to the west end of the southern building are evident in the 1986 aerial photograph. The Property is evident in its current configuration in the 1986 through 2000 aerial photographs.

No irregular land surface disturbances of concern were noted during the aerial photograph review indicating potential areas of improper waste disposal on the Property.

4.4.3 Sanborn Maps

Sanborn map coverage was identified for the Property for the years 1886, 1893, 1899, 1907, 1930, 1950, 1980, and 1990. Copies of the Sanborn maps reviewed are provided as Appendix N.

The Property is occupied by the Jackson Paper Company in the 1886 through 1893 Sanborn maps. A coal shed is evident on the western portion of the subject building in the 1886 through 1899 Sanborn maps. Michigan Bag & Paper Company is evident on the Property in the 1899 through 1907 Sanborn maps. A machine shop is identified in the south-central portion of the subject building in the 1899 through 1907 Sanborn maps. The Property is occupied by Potter Manufacturing Company in the 1930 Sanborn map. Building additions are evident in the central and southeastern portion of the building. The central portion of the subject building is labeled as enameling, lacquer spraying, and saw tooth polishing. The Property is identified as occupied by numerous occupants in the 1950 Sanborn map. The building appears to be used for bottling and manufacturing. The building has been demolished in the 1980 Sanborn map and two new buildings labeled as warehouses are evident on the Property. A warehouse addition, connecting the two warehouses is evident in the 1990 Sanborn map.

4.4.4 City Directories

City directories were reviewed for the Property and adjoining properties at the Library of Michigan for the years 1955, 1965, 1975, 1985, 1997, 2002, and 2008. Based on a review of the city directories, the Property was occupied by Jack Smith Beverages Inc. (1975-1985), Owen Machine & Tool, Inc. (1997), and Open Machine Systems, Owen Machine & Tool, Inc., and Quality Transmission Parts (2002). There were no building occupants listed on the Property in the city directories prior to 1975. A summary of the city directories reviewed are provided in Appendix O.

4.4.5 Title Search

A title search was not included in the scope of this Phase I ESA. According to assessing records, the Property is owned by Quality Transmission Parts Prop LLC.

4.5 Historical Use Information on Adjoining Properties

The southern adjoining property has been utilized for industrial purposes since at least 1886. Site operations have consisted of a foundry, machine shop, oven manufacturing company, a garment manufacturing company, and plating company. The Property has been occupied by Michner Plating since at least 1950.

The western adjoining property has been occupied by railroad lines since at least 1886. Crude oil tanks are identified on the western adjoining property in the 1893 Sanborn map.

The northern adjoining property has been utilized for industrial purposes since at least 1886. Occupants have included Austin, Tomlinson & Webster Manufacturing Company, American Fork & Hoe Company, and Acme Industries.

The eastern adjoining property at 101 E. Ganson Street was historically occupied by a gas station from at least 1930 through 1965. The site has also been occupied by used car dealers and an automotive service garage.

The eastern adjoining property at 100 E. Ganson Street was historically occupied by a residence in 1930. A gas station occupied the site from at least 1955 until 1965. The site has also been occupied by used car sales.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

ASTI inspected the Property on June 25, 2009. Areas observed included the interior of the subject building, the exterior portions of the Property, and the adjoining properties. Findings reported in this section are based on site observations, review of available documentation, and interviews with persons knowledgeable in the areas of inquiry. No limiting conditions were identified during the site reconnaissance, except for a lack of lighting in the subject building. This was considered a limiting condition in evaluating Property conditions.

5.2 General Site Settings

The Property is located on the southwest corner of East Ganson Street and North Mechanic Street in the southeast ¼ of Section 34, T2S-R1W, City of Jackson, Jackson County, Michigan. The Property consists of a single parcel totaling 1.56 acres in size. A 31,554 square-foot industrial building occupies the Property. In addition, a 324 square-foot garage is located on the northeast portion of the Property.

5.3 Exterior Observations

No areas of surface staining, stressed vegetation, or other signs of disposal of hazardous substances or petroleum products were observed on the Property. Trench drains were observed near the overhead doors on the eastern portion of the Property. There was no evidence of a release into the trench drains.

5.3.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

No hazardous substances and petroleum products were observed on exterior areas of the Property.

5.3.2 Hazardous Substance Containers and Unidentified Substance Containers

No hazardous substance containers or unidentified substance containers were observed on exterior areas of the Property.

5.3.3 Storage Tanks

Underground Storage Tanks

ASTI did not observe evidence of potential USTs (i.e., fill ports, vent pipes, or dispensing

pumps) on the Property during the site inspection. ASTI's review of the following documents indicated that there are no USTs currently registered to the Property: (1) the EDR Report for the study site and (2) UST registration records maintained or accessed by the DEQ Remediation and Redevelopment Division (RRD) or the City of Jackson Fire Department.

Above Ground Storage Tanks

ASTI did not observe evidence of potential ASTs (i.e., fill ports, vent pipes, or cradles) on the Property during the site inspection.

5.3.4 Indications of PCBs

No electrical or hydraulic equipment known to contain polychlorinated biphenyls (PCBs), or likely to contain PCBs, was observed on the Property or identified from the interviews or records review. One pole-mounted transformer was observed near the eastern boundary of the Property. The transformer was not labeled. There was no evidence of a material release associated with the transformer.

5.3.5 Indications of Solid Waste Disposal

No indications of solid waste disposal were observed on the Property.

5.4 Interior Observations

One manhole and one catch basin were observed inside the northern portion of the subject building. The manhole is associated with two trench drains in the northern portion of the subject building. There was no evidence of a material release into the trench drains. The manhole could not be opened for inspection. The catch basin is located at the bottom of a loading dock near the northwest corner of the subject building. Green liquid, possibly antifreeze, was observed in the catch basin. Concrete-sealed trench drains were also observed in the southern portion of the subject building.

5.4.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

No hazardous substances and petroleum products were identified in the interior of the subject buildings, except for one and two-gallon containers of fuel located on a pallet and four 5-gallon plastic buckets and one large plastic container with oil in the northern portion of the subject building. In addition, a former secondary containment pad was observed

containing oil in the northern portion of the subject building.

5.4.2 Hazardous Substance Containers and Unidentified Substance Containers

No hazardous substance containers were observed in the subject building, other than those discussed in Section 5.4.1.

5.4.3 Storage Tanks

Underground Storage Tanks

ASTI did not observe evidence of potential underground storage tanks (USTs) (i.e., fill ports, vent pipes, or dispensing pumps) on the interior of the subject building during the site inspection.

Above Ground Storage Tanks

There was no physical evidence of or available information regarding current or historical use of above ground storage tanks (ASTs) on the interior of the subject building.

5.4.4 Indications of PCBs

ASTI inspected the Property for the presence of equipment that has the potential to contain PCBs, such as electric transformers, capacitors, and fluorescent light ballasts. No suspected PCB-containing equipment was observed in the subject building, other than fluorescent light ballasts. Transformers were observed in the subject building, but appear to be dry transformers.

5.4.5 Indications of Solid Waste Disposal

No indication of solid waste disposal was observed in the subject building, other than boxes and the containers identified above.

6.0 INTERVIEWS

6.1 Interview with Owner

ASTI was unable to interview the current Property owner during this investigation.

6.2 Interview with Site Manager

The building is currently vacant.

6.3 Interview with Occupants

The building is currently vacant.

6.4 Interviews with Local Government Officials

Conversations with local government officials were limited to requesting assessment, building, and fire department records. No significant information was obtained from the interviews.

6.5 Interviews with Others

No one else was interviewed during the investigation.

7.0 FINDINGS

No environmental conditions were found with regard to the current and historical use of the Property, except for:

- the historical use of the Property for industrial operations that included a machine shop, automotive repair, and enameling, lacquer spraying, and saw tooth polishing operations;
- antifreeze observed in a catch basin in the northern portion of the subject building;
- containers of oils and fuel observed in the northern portion of the subject building;
- sealed trench drains observed in the southern portion of the subject building;

No environmental conditions were identified with regard to the current and historical use of the adjoining properties, except for:

- the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

No environmental conditions were found with regard to the database search, except for:

- the Property's listing as a LUST site and BEA site.

8.0 OPINION

In the professional opinion of ASTI, an appropriate level of inquiry has been made into the previous ownership and uses of the Property consistent with good commercial and customary practice in an effort to minimize liability. No evidence or indication of environmental conditions has been revealed on the Property, except for:

- the historical use of the Property for industrial operations that included a machine shop, automotive repair, and enameling, lacquer spraying, and saw tooth polishing operations;
- antifreeze observed in a catch basin in the northern portion of the subject building;
- containers of oils and fuel observed in the northern portion of the subject building;
- sealed trench drains observed in the southern portion of the subject building;
- the Property's listing as a LUST site and BEA site; and
- the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

Data gaps encountered during the investigation include a lack of user provided information, lack of an interview with the current and prior owners of the Property, and the inability to identify the first developed use of the Property. Based on the known prior use of the Property, these data gaps are not considered to be data failure.

9.0 CONCLUSIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05 of 546 N. Mechanic Street in Jackson, Jackson County, Michigan, referred to as the "Property". Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Property, except for:

- the historical use of the Property for industrial operations that included a machine shop, automotive repair, and enameling, lacquer spraying, and saw tooth polishing operations;
- antifreeze observed in a catch basin in the northern portion of the subject building;
- containers of oils and fuel observed in the northern portion of the subject building;
- sealed trench drains observed in the southern portion of the subject building;
- the Property's listing as a LUST site and BEA site; and
- the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

With regard to the containers of oils and fuel observed in the northern portion of the subject building, ASTI does not recommend a subsurface investigation with regard to these materials. ASTI recommends that the containers and their contents be properly removed and disposed.

ASTI recommends a subsurface investigation with regard to the listed RECs to determine if the Property's natural resources have been impacted from the historical use of the Property for industrial operations and the historical use of the southern adjoining property as a foundry, machine shop, and plating company.

10.0 DEVIATIONS

No deletions, deviations, or additions to E 1527-05 have occurred during this assessment.

11.0 ADDITIONAL SERVICES

Asbestos-Containing Materials (ACMs)

An ACM inspection was not included in the scope of this Phase I ESA; however, based on the age of the subject building (1971), ACMs could potentially be present.

Lead-Based Paint (LBP)

A LBP inspection was not included in the scope of this Phase I ESA. However, based on the age of the subject building (1971), LBP could potentially be present.

Wetlands

A wetland delineation was not included in the scope of this Phase I ESA. No potential wetland indicators (vegetation, hydric soils, etc.) were observed during the site inspection.

Vapor Intrusion

A vapor intrusion assessment was not included in the scope of this Phase I ESA. However, potential vapor intrusion conditions (pVIC) exist based on the historical use of the Property and adjoining properties.

12.0 REFERENCES

The following references were used in preparing this Phase I ESA.

- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05
- The EDR Radius Map Report with GeoCheck, June 23, 2009
- Aerial Photographs, City of Jackson Engineering Department, (1950, 1960, 1970, 1980, and 2000)
- Aerial Photograph, Jackson County GIS Department, (1986, 1991, and 1996)
- City Directories (1955, 1965, 1975, 1985, 1997, 2002, and 2008)
- Sanborn Maps, EDR, (1886, 1893, 1899, 1907, 1930, 1950, 1980, and 1990)
- Consumers Energy SIMs Record Card
- User Questionnaire, Representative from Performance Automotive, Inc.
- Jackson County Health Department Response Letter, June 24, 2009
- DEQ Records
- DEQ RRD Perfected Lien List, March 24, 2009
- Jackson Fire Department Records
- Jackson Municipal Records
- City of Jackson Online Zoning Map, April 3, 2009

13.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Shawn L. Shadley
Environmental Scientist

Appendix A

RESUME

ASTI ENVIRONMENTAL



SHAWN SHADLEY
Environmental Scientist

PROFILE

Certifications/Training

OSHA HAZWOPER 40 Hour Training
OSHA Confined Space Training – June 2003
Certified Asbestos Inspector, Michigan #A29309
Certified Asbestos Management Planner, Michigan #A29309
Certified Asbestos Project Designer, Michigan #A29309
Certified Asbestos Hazard Evaluation Specialist, Ohio #ES34936
Certified Storm Water Management Operator, Michigan #C-10849
Section 106 of the National Historic Preservation Act

Education

Central Michigan University, B.S. Geography & Environmental Science, 2000

Experience History

Associate II, Property Services Group, ASTI Environmental
Environmental Scientist, RESCOM Environmental Corp.
Internship, Newaygo Conservation District

Professional Background

Mr. Shadley has performed Phase I Environmental Site Assessments and asbestos inspections of residential, commercial, and industrial property in Michigan. The Property evaluations included site inspections, historical research, and contact with state and local agencies. He has identified Recognized Environmental Conditions in Phase I reports and has conducted necessary Phase II sampling. Mr. Shadley has also conducted informal biological assessments and determined site conditions with regard to wetland and floodplain indicators required for NEPA compliance.

Years Experience: 7 years – ASTI
 2 years – other firms

PROJECT EXPERIENCE

Phase II Investigations, multiple

Conducted soil and groundwater investigations of land previously used that may be environmentally impacted or located adjacent to property previously used for industrial purposes.

Historical Surveys

Conducted file reviews and windshield surveys to fulfill NEPA and NHPA Section 106 requirements.

Groundwater Sampling

Installed monitoring wells and has conducted groundwater sampling for various MDEQ 213 and 201 sites.

Phase I Environmental Site Assessment Investigations, multiple

Conducted Environmental Site Assessments including site inspections and municipal research on vacant lots, residential, commercial, and industrial properties.

Indoor Air Quality, multiple

Conducted indoor air quality inspections for residential and commercial properties with regards to suspected mold problems.

Asbestos Inspection, multiple

Conducted asbestos inspections for residential, commercial, and industrial properties to determine whether ACM was present and required remediation. Collected samples, reviewed laboratory analysis and provided clients with report of methods and findings.

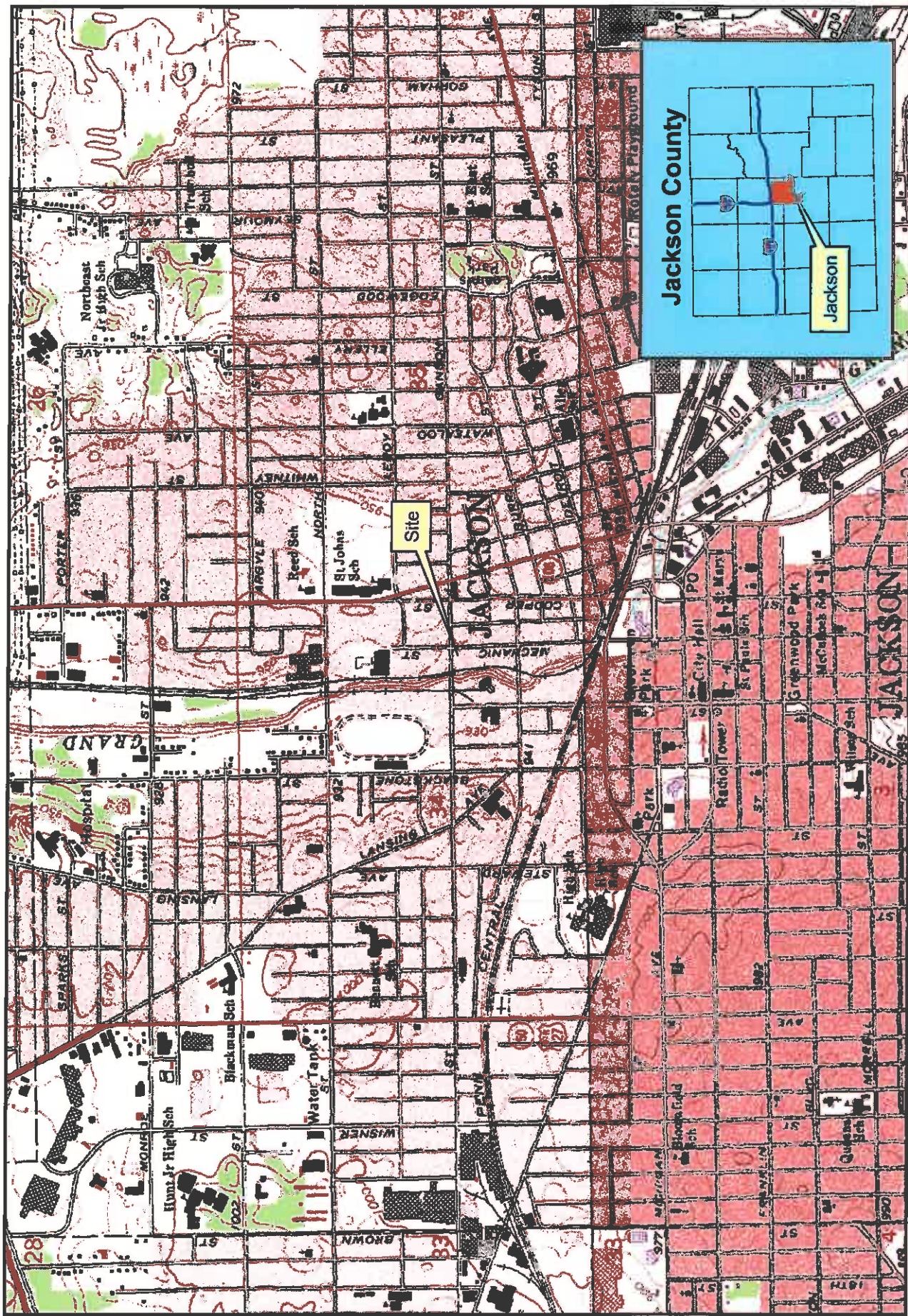
Storm Water Management Operator, Lansing

Monitored weekly site inspections of a residential development to determine if soil erosion and sediment control measures were properly maintained and provided additional measures of soil erosion and sediment control in areas of concern.

Baseline Environmental Assessments, multiple

Conducted and directed numerous Baseline Environmental Assessments (BEAs) throughout Michigan. Sites have included manufacturing facilities, residential developments, dry cleaners, and commercial properties. Assisted clients and legal counsel in Category N, D, and S BEAs for property purchases. These sites included new property uses with no hazardous substance use and continued uses of properties with continued hazardous substance use. Succeeded in obtaining favorable determinations from the Michigan Department of Environmental Quality for BEAs and due care plans.

Appendix B



546 N. Mechanic St. Jackson, MI

Created for: Performance Automotive Inc.

Created by: AGS, June 26, 2009, ASTI Project 6715-15

Figure 1 - Site Location Map

Appendix C

General Property Information

[Back to Non-Printer Friendly Version] [Send To Printer]

Parcel: 1-015100000 Data Current As Of: 1:34 AM 6/26/2009

Property Address

[collapse]

546 N MECHANIC ST
JACKSON, MI 49201

Owner Information

[collapse]

QUALITY TRANSMISSION PARTS PROP LLC
546 N MECHANIC ST
JACKSON, MI 49201

Unit: 50

Taxpayer Information

[collapse]

SEE OWNER INFORMATION

General Information for Tax Year 2009

[collapse]

Property Class:	301	Assessed Value:	\$224,900
School District:	38170 - JACKSON PUBLIC	Taxable Value:	\$224,900
State Equalized Value:	\$224,900	Map #	N/A
User Number Indx:		Date of Last Name Chg:	N/A

Date Filed:
Principal Residence Exemption
(2009 May 1): 0.0000 %
Principal Residence Exemption
(2009 Final): 0.0000 %

Previous Year Info	MBOR Assessed	Final S.E.V.	Final Taxable
2008	\$309,400	\$309,400	\$309,400
2007	\$318,150	\$318,150	\$318,150

Land Information

[collapse]

Acreage:	1.56	Frontage:	0.00 Ft.
Zoning Code:	I-1	Depth:	0.00 Ft.
Land Value:	\$47,600	Mortgage Code:	
Land Improvements:	\$16,032	Lot Dimensions/Comments:	N/A
Renaissance Zone:	NO		

Legal Information for 1-015100000

[collapse]

COM AT SW COR OF GANSON & MECHANIC ST TH W ALG S LN OF GANSON ST TO E BANK OF GRAND RIVER TH SLY ALG ELY BANK OF GRAND RIVER 227.04 FT TO N LN OF NOVELTY MFG CO LAND TH E ALG N LN OF NOVELTY MFG CO LAND TO W LN OF MECHANIC ST TH N ALG W LN OF MECHANIC ST TO POB EX R/W OF JL & S RR BEING PART OF BLK 12 BLACKMAN'S ADD & LAND LYING BETWEEN BLK 12 & RIVER NE 1/4 SE 1/4 SEC 34 T2S R1W BLACKMAN'S ADD

Sales Information

2 sale record(s) found.

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms Of Sale	Libr/Page
-----------	------------	------------	---------	---------	---------------	-----------

08/23/2002	\$700,000.00	WD	KTD LIMITED	QUALITY TRANSMISSION PARTS FROP LLC	ARMS- LENGTH	1707-216
10/03/1991	\$435,000.00	LC	DANIEL L JACOB CO INC	K.T.D. LTD	ARMS- LENGTH	1642-1103

Building Information

2 building(s) found.

Description	Floor Area	Yr Built	Est. TCV
<input checked="" type="checkbox"/> Commercial/Industrial Building 1 - <i>Industrial, Light Manufacturing</i>	31551 Sq. Ft.	1972	\$380,884

General Information

Floor Area:	31551 Sq. Ft.	Estimated TCV:	\$380,884
Occupancy:	Industrial, Light Manufacturing Class:		S
Stories Above Ground:	1	Average Story Height:	18
Basement Wall Height:	N/A		
Year Built:	1972	Year Remodeled:	0
Percent Complete:	100%	Heat:	Space Heaters, Gas with Fan
Physical Percent Good:	49%	Functional Percent Good:	100%
Economic Percent Good:	75%	Effective Age:	31 yrs.

<input checked="" type="checkbox"/> Residential Building 1	0 Sq. Ft.	0	\$5,354
--	-----------	---	---------

General Information

Floor Area:	0 Sq. Ft.	Estimated TCV:	\$5,354
Garage Area:	324 Sq. Ft.	Basement Area:	0 Sq. Ft.
Foundation Size:	0 Sq. Ft.		
Year Built:	0	Year Remodeled:	0
Occupancy:	Single Family	Class:	C
		Tri-Level?:	NO
Percent Complete:	100%	Heat:	Forced Air w/ Ducts
AC w/Separate Ducts:	NO	Wood Stove Add-on:	NO
Bedrooms:	0	Water:	N/A
Style:	TRADITIONAL	Sewer:	N/A

Area Detail - Basic Building Areas

Height	Foundation	Exterior	Area	Heated

Area Detail - Overhangs

Height	Exterior	Area	Included in Size for Rates

Basement Finish

Recreation:	0 Sq. Ft.	Percent Good:	0
Living Area:	0 Sq. Ft.	Percent Good:	0
Walk Out Doors:	0	No Concrete Floor Area:	0 Sq. Ft.

Plumbing Information

3-Fixture Baths:	1
------------------	---

Garage Information

Garage # 1

Area:	324 Sq. Ft.	Exterior:	Siding
Foundation:	18 Inch	Common Wall:	Detached
Year Built:		Finished?:	NO
Auto Doors:	0	Mech Doors:	0

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Appendix D

Appendix E

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 1. View of the Property facing northwest from Mechanic Street



Photo 2. View of the northwest portion of the Property facing southeast

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley



PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 3. Interior view of the office area



Photo 4. View of sealed trench drains in the southern portion of the Property

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 5. View of staining around the catch basin in the northwest portion of the subject building



Photo 6. View of chemical storage in the northern portion of the subject building

ASTI File 6715-15

June 25, 2009

Photographed By Shawn Shadley

ASTi
ENVIRONMENTAL

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 7. View of the shed on the northwestern portion of the Property



Photo 8. Interior view of the garage

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley



PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 9. View of the eastern adjoining property at 101 E. Ganson



Photo 10. View of the eastern adjoining property at 100 E. Ganson

ASTI File 6715-15

June 25, 2009

Photographed By Shawn Shadley

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ENVIRONMENTAL

PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 11. View of the northern adjoining property at 600 N. Mechanic



Photo 12. View of the south adjoining property at 520 N. Mechanic

ASTI File 6715-15

June 25, 2009

Photographed By Shawn Shadley



PHOTO LOG
546 N. Mechanic Street, Jackson, Michigan



Photo 13. View of the eastern adjoining property at 543 N. Mechanic



Photo 14. View of the western adjoining property facing south

ASTI File 6715-15
June 25, 2009
Photographed By Shawn Shadley



Appendix F

Address: 542 N MECHANIC ST, JACKSON

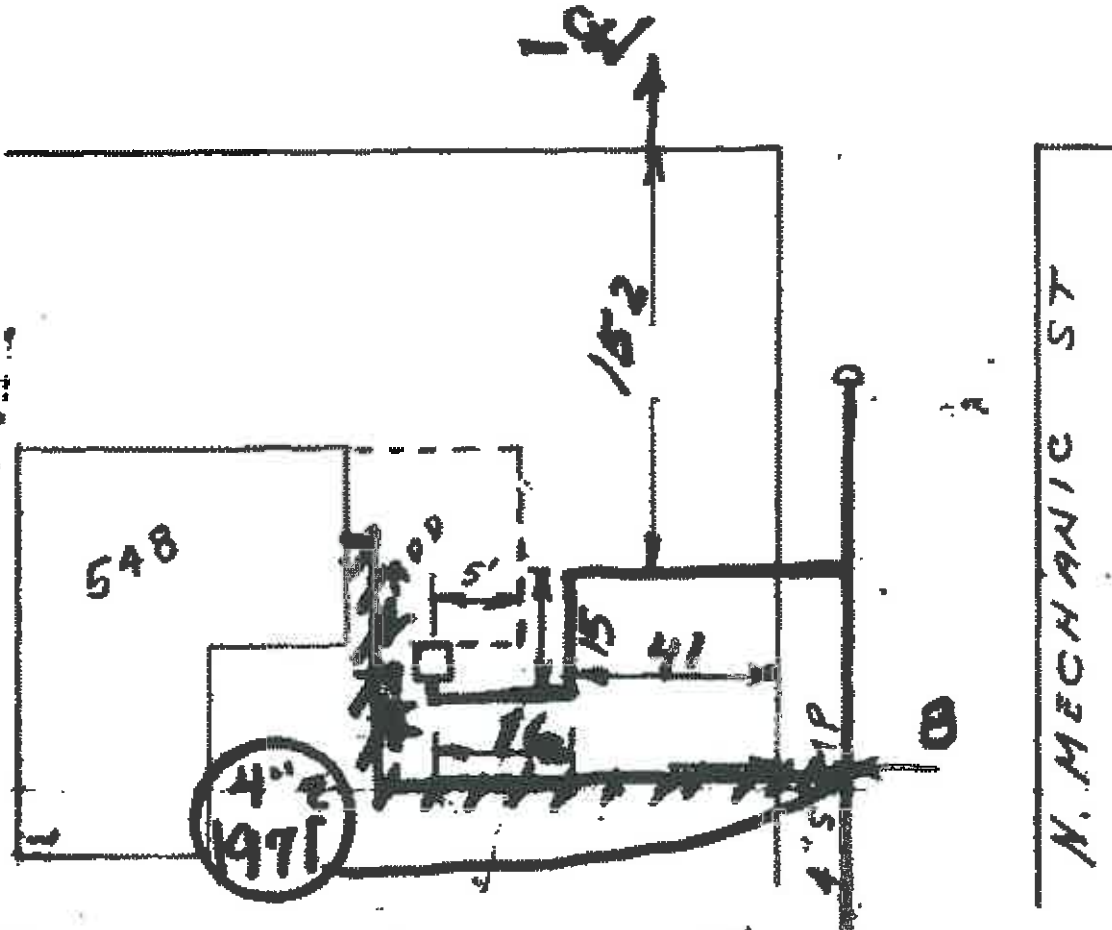
Gas Service Extension: 1 1/8" P, Inserted: N, Year Installed: 1973

Drawn by D. HANSON Date 5-7-01

Previous

N

E. GANSON ST



Joint With _____ and _____ and _____
 Branch With _____ ☐ Muf ☐ Met

WARNING: ALL LOCATIONS ARE APPROXIMATE. FACILITIES MAY HAVE BEEN ADDED AND/OR ALTERED AFTER MAP REVISED DATE. IF YOU ARE DIGGING, LOCATIONS MUST BE VERIFIED BY FIELD STAKING UPON REQUEST AT NO CHARGE, BY CALLING MISS DIG 3 WORKING DAYS IN ADVANCE AT 1-800-482-7171. USE OF THIS WEB SITE DOES NOT RELIEVE THE USER OF ANY LEGAL DUTY TO COMPLY WITH PUBLIC ACT 53 OF 1973 OR ANY OTHER APPLICABLE LAW, REGULATION, RULE, STANDARD, OR ORDINANCE.

Appendix G

USER QUESTIONNAIRE

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

Respondent Name:	Performance Automotive Inc
Response Date:	6/24/09
Address:	3546 N Medway, Jackson

1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

☐ Yes ☒ No

2. Activity and Land Use Limitations

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal tribal, state, or local law?

☐ Yes ☒ No

3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

☐ Yes ☒ No

4. Purchase Price vs. Fair Market Value

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

☐ Yes ☒ No

5. Commonly known or reasonably ascertainable information about the property

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

☒ Yes ☐ No

5a. Do you know the past uses of the property?

☒ Yes ☐ No

5b. Do you know of specific chemicals that are present or once were present at the property?

☒ Yes ☐ No

5c. Do you know of spills or other chemical releases that have taken place at the property?

☐ Yes ☒ No

5d. Do you know of any environmental cleanups that have taken place at the property?

☐ Yes ☒ No

6. The degree of obviousness of the presence or likely presence of contamination

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

☒ Yes ☐ No

Appendix H

546 N. Mechanic Street

546 N. Mechanic Street

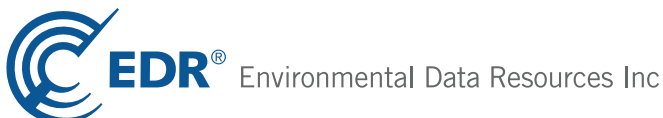
Jackson, MI 49201

Inquiry Number: 2525346.1s

June 23, 2009

The EDR Radius Map™ Report with GeoCheck®

Prepared using the EDR FieldCheck® System



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of the environmental records was conducted by Environmental Data Resources, Inc. (EDR). APPLIED SCIENCE & TECHNOLOGY used the EDR FieldCheck System to review and/or revise the results of this search, based on independent data verification by APPLIED SCIENCE & TECHNOLOGY. The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

546 N. MECHANIC STREET
JACKSON, MI 49201

COORDINATES

Latitude (North): 42.254400 - 42° 15' 15.8"
Longitude (West): 84.406600 - 84° 24' 23.8"
Universal Transverse Mercator: Zone 16
UTM X (Meters): 713934.7
UTM Y (Meters): 4681065.5
Elevation: 927 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 42084-C4 JACKSON NORTH, MI
Most Recent Revision: 1976

South Map: 42084-B4 JACKSON SOUTH, MI
Most Recent Revision: 1976

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7.

Site	Database(s)	EPA ID
JACK SMITH BEVERAGES 546 N MECHANIC ST JACKSON, MI 49201	LUST Facility Status: Closed Facility Status: Closed UST BEA	N/A
QUALITY TRANSMISSION PARTS CO LLC 546 N MECHANIC ST JACKSON, MI 49201	RCRA-SQG FINDS	MID985628965

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No sites were identified in following databases.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Facilities Database

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
HIST LF..... Inactive Solid Waste Facilities
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
CDL..... Clandestine Drug Lab Listing

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System
LIENS..... Lien List

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
SPILLS..... Pollution Emergency Alerting System

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems
ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database
RAATS..... RCRA Administrative Action Tracking System
DRYCLEANERS..... Drycleaning Establishments
NPDES..... List of Active NPDES Permits
AIRS..... Permit and Emissions Inventory Data
INDIAN RESERV..... Indian Reservations

EXECUTIVE SUMMARY

SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the CORRACTS list, as provided by EDR, and dated 03/25/2009 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>EATON AEROQUIP</i>	<i>300 S EAST AVE</i>	<i>SE 1/2 - 1 (0.858 mi.)</i>	<i>58</i>	<i>90</i>

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the RCRA-SQG list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>CONSUMERS ENERGY CO</i>	<i>135 W TRAIL ST</i>	<i>SSW 1/8 - 1/4 (0.159 mi.)</i>	<i>23</i>	<i>54</i>

EXECUTIVE SUMMARY

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the RCRA-CESQG list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CONSUMERS ENERGY CO	115 W TRAIL ST	SSW 1/8 - 1/4 (0.146 mi.)	21	52

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Quality's Contaminated Sites List on Diskette With Address.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the SHWS list, as provided by EDR, and dated 05/15/2009 has revealed that there are 14 SHWS sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ACME INDUSTRIES Facility Status: Evaluation conducted	600-626 N MECHANIC ST	ENE 0 - 1/8 (0.036 mi.)	B5	13
DEPARTMENT OF MILITARY AFFAI Facility Status: Evaluation in progress	100 ARMORY COURT	NNE 1/8 - 1/4 (0.134 mi.)	D14	35
GREAT LAKES HOME HEALTH Facility Status: Inactive - no actions taken to address contamination	900 COOPER ST	NE 1/8 - 1/4 (0.240 mi.)	29	65
HOWARDS RADIATOR SERVICE Facility Status: Inactive - no actions taken to address contamination	401 N JACKSON ST	SSW 1/4 - 1/2 (0.311 mi.)	G33	69
CONSUMERS ENERGY HDQS PROJ ACT Facility Status: Interim Response conducted - No further activities anticipated	FRANCIS ST.	SSE 1/2 - 1 (0.631 mi.)	52	88
GEORGE'S SERVICE CENTER Facility Status: Deleted - available documentation does not support listing	1135 COOPER	NNE 1/2 - 1 (0.643 mi.)	53	88
MOTOR STATE OIL & GREASE Facility Status: Interim Response in progress	155 HOBART	N 1/2 - 1 (0.670 mi.)	54	89
145 W MONROE Facility Status: No status assigned	145 W MONROE	N 1/2 - 1 (0.734 mi.)	55	89
LIBRA INDUSTRIES INC OF MICHIG Facility Status: Interim Response in progress	1435 N BLACKSTONE ST	NNW 1/2 - 1 (0.877 mi.)	59	101
JACKSON MGP Facility Status: Interim Response in progress	703 AIRLINE DRIVE	SSE 1/2 - 1 (0.916 mi.)	60	113
CERTAINTED CORPORATION Facility Status: Interim Response in progress	701 E WASHINGTON AVE	SE 1/2 - 1 (0.956 mi.)	61	113
MI DEPT/ENVIRONMENTAL QUALITY Facility Status: Evaluation conducted	919 AMUR ST	SSE 1/2 - 1 (0.997 mi.)	K62	119

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
EATON CORP- EAST ST Facility Status: Evaluation in progress	300 S EAST ST	SSE 1/2 - 1 (0.999 mi.)	K63	122

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SAM'S IRON & METAL Facility Status: Interim Response in progress	212 WEST MONROE	NNW 1/2 - 1 (0.755 mi.)	56	89

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's Leaking Underground Storage Tank (LUST) Database.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the LUST list, as provided by EDR, and dated 03/19/2009 has revealed that there are 12 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GOODWILL IND OF CENTRAL MICHIG Facility Status: Closed Facility Status: Closed	617 N MECHANIC ST	NNE 0 - 1/8 (0.116 mi.)	D11	31
MI DEPT/MILITARY & VETERANS AF Facility Status: Closed Facility Status: Closed <i>*Additional key fields are available in the Map Findings section</i>	100 ARMORY CT	NNE 1/8 - 1/4 (0.134 mi.)	D16	39
AIRPORT LIMOUSINE SERVICE INC Facility Status: Open	240 W TRAIL ST	SW 1/4 - 1/2 (0.260 mi.)	31	67
WILLIAM NAVARRE Facility Status: Open	317 OAK ST	SSE 1/4 - 1/2 (0.351 mi.)	37	72
KAR KLINIC Facility Status: Closed	401 W GANSON ST	W 1/4 - 1/2 (0.392 mi.)	40	73
GOODYEAR TIRE CENTER #5131 Facility Status: Closed	224 N JACKSON ST	SSW 1/4 - 1/2 (0.413 mi.)	43	76
PEARL STREET GARAGE Facility Status: Closed Facility Status: Closed	250 W PEARL ST	SSW 1/4 - 1/2 (0.447 mi.)	45	80
MILLER'S AUTOMOTIVE Facility Status: Open	500 E PEARL ST	SE 1/4 - 1/2 (0.458 mi.)	46	82

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JACKSON COUNTY FAIRGROUNDS Facility Status: Closed	200 W GANSON ST	W 0 - 1/8 (0.111 mi.)	8	17
JACKSON FIRE DEPT Facility Status: Open Facility Status: Open	518 N JACKSON ST	SW 1/8 - 1/4 (0.161 mi.)	E24	57
ART MOEHN CHEVROLET HONDA GEO Facility Status: Closed Facility Status: Closed	500 N JACKSON ST	SW 1/8 - 1/4 (0.184 mi.)	F26	59

EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
COMMERCIAL EXCHANGE Facility Status: Closed	150 W NORTH ST	NNW 1/4 - 1/2 (0.325 mi.)	H35	70

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Michigan UST database.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the UST list, as provided by EDR, and dated 03/09/2009 has revealed that there are 8 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LINEAR AUTO-MATICS SYSTEMS CO	543 N MECHANIC ST	SSE 0 - 1/8 (0.079 mi.)	7	14
GOODWILL IND OF CENTRAL MICHIG	617 N MECHANIC ST	NNE 0 - 1/8 (0.116 mi.)	D11	31
MI DEPT/MILITARY & VETERANS AF	100 ARMORY CT	NNE 1/8 - 1/4 (0.134 mi.)	D16	39
#4 UNITED (TULSA OIL CORP)	405 S MILWAUKEE	ESE 1/8 - 1/4 (0.207 mi.)	28	64
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JACKSON COUNTY FAIRGROUNDS	200 W GANSON ST	W 0 - 1/8 (0.111 mi.)	8	17
SALCO ENG & MFG	506 N MECHANIC ST	SSE 1/8 - 1/4 (0.135 mi.)	C19	47
JACKSON FIRE DEPT	518 N JACKSON ST	SW 1/8 - 1/4 (0.161 mi.)	E24	57
ART MOEHN CHEVROLET HONDA GEO	500 N JACKSON ST	SW 1/8 - 1/4 (0.184 mi.)	F26	59

State and tribal institutional control / engineering control registries

AUL: A listing of sites with institutional and/or engineering controls in place.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the AUL list, as provided by EDR, and dated 04/07/2009 has revealed that there is 1 AUL site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AIRMASTER FAN COMPANY	150 W. NORTH STREET	NNW 1/4 - 1/2 (0.329 mi.)	H36	71

State and tribal Brownfields sites

BROWNFIELDS: Brownfields and USTfield Site Database.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the BROWNFIELDS list, as provided by EDR, and dated 04/13/2009 has revealed that there are 3 BROWNFIELDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HITCHES & MORE	101 E GANSON ST	ENE 0 - 1/8 (0.036 mi.)	B6	13

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GOODWILL INDUSTRIES	617 N MECHANIC ST	NNE 0 - 1/8 (0.116 mi.)	D12	32
HOWARDS RADIATOR	N. JACKSON STREET	SSW 1/4 - 1/2 (0.289 mi.)	G32	69

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properities addressed by Cooperative Agreement Recipients and Brownfields properties addressed by Targeted Brownfields Assessments

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the US BROWNFIELDS list, as provided by EDR, and dated 10/01/2008 has revealed that there are 5 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ARMORY PARK ARTS PROJECT	600-626 N. MECHANIC ST.	ENE 0 - 1/8 (0.036 mi.)	B4	11
ARMORY	100 ARMORY COURT	NNE 1/8 - 1/4 (0.134 mi.)	D15	36
ZOERMAN-CLARK	626 N. MECHANIC STREET	N 1/8 - 1/4 (0.135 mi.)	D20	47
KRESGE BUILDING	133-135 W. MICHIGAN AVE	S 1/4 - 1/2 (0.420 mi.)	44	77
WOOLWORTH BUILDING	165 WEST MICHIGAN	S 1/4 - 1/2 (0.481 mi.)	49	84

Local Lists of Hazardous waste / Contaminated Sites

DEL SHWS: Sites that have been delisted or deleted from the List of Contaminated Sites. The available documentation for the site does support it's listing or the site no longer meets criteria specified in rules.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the DEL SHWS list, as provided by EDR, and dated 02/20/2009 has revealed that there are 2 DEL SHWS sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BUTTERFIELD DEVELOPMENT	110 W. MICHIGAN AVENUE	S 1/4 - 1/2 (0.476 mi.)	J47	84
GEORGE'S SERVICE CENTER	1135 COOPER	NNE 1/2 - 1 (0.643 mi.)	53	88

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the RCRA-NonGen list, as provided by EDR, and dated 11/12/2008 has revealed that there are 8 RCRA-NonGen sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LINEAR AUTO-MATICS SYSTEMS CO	543 N MECHANIC ST	SSE 0 - 1/8 (0.079 mi.)	7	14
WEATHERWAX FOUNDATION ACME IND	618 N MECHANIC	NNE 1/8 - 1/4 (0.129 mi.)	D13	32
MI DEPT/MILITARY & VETERANS AF	100 ARMORY CT	NNE 1/8 - 1/4 (0.134 mi.)	D16	39
BENDER AND LOUDON MOTOR FREIGH	115 ARMORY CT	NNE 1/8 - 1/4 (0.134 mi.)	D18	45
ART MOEHN CHEVROLET	500 N JACKSON	W 1/8 - 1/4 (0.192 mi.)	27	61
J & J INDUSTRIES INC	414 N JACKSON ST	SSW 1/8 - 1/4 (0.246 mi.)	30	65
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MICHNER PLATING CO	520-536 N MECHANIC ST	SSE 0 - 1/8 (0.113 mi.)	C9	18
M & L PLATING CO	520-530 N MECHANIC	SSE 0 - 1/8 (0.113 mi.)	C10	28

BEA: Baseline Environmental Assessment.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the BEA list, as provided by EDR, and dated 03/30/2009 has revealed that there are 12 BEA sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	101 E GANSON	ENE 0 - 1/8 (0.036 mi.)	B3	11
ARMORY ARTS	100 ARMORY COURT	NNE 1/8 - 1/4 (0.134 mi.)	D17	44
Not reported	232 VAN BUREN	SSW 1/4 - 1/2 (0.321 mi.)	34	69
Not reported	405 N BLACKSTONE	SW 1/4 - 1/2 (0.381 mi.)	39	73
Not reported	226 W LOUIS GLICK HWY	SSW 1/4 - 1/2 (0.396 mi.)	I41	75
Not reported	232 W LOUIS GLICK HWY	SSW 1/4 - 1/2 (0.399 mi.)	I42	75
PEARL STREET GARAGE	250 W PEARL ST	SSW 1/4 - 1/2 (0.447 mi.)	45	80
Not reported	100 W MICHIGAN	S 1/4 - 1/2 (0.477 mi.)	J48	84
Not reported	209 N BLACKSTONE	SSW 1/4 - 1/2 (0.488 mi.)	50	87
Not reported	409 EAST LOUIS GLICK HI	SSE 1/4 - 1/2 (0.499 mi.)	51	87
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	524 N JACKSON	SW 1/8 - 1/4 (0.155 mi.)	E22	54
Not reported	505 N JACKSON	SW 1/8 - 1/4 (0.179 mi.)	F25	59

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

An online review and analysis by APPLIED SCIENCE & TECHNOLOGY of the Manufactured Gas Plants list, as provided by EDR, has revealed that there are 2 Manufactured Gas Plants sites within approximately 1 mile of the target property.

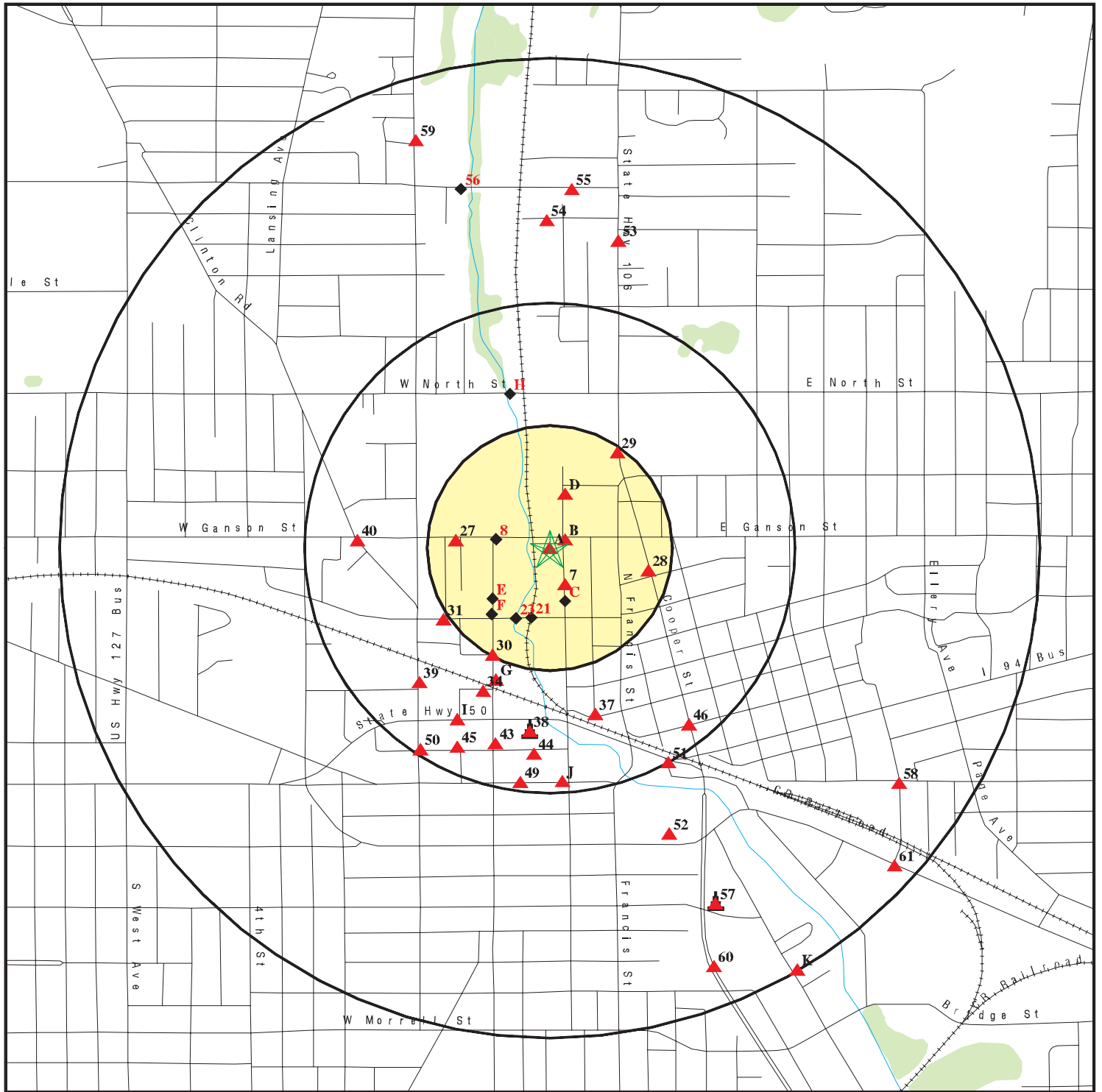
EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JACKSON GASLIGHT CO	W. CLINTON STREET	S 1/4 - 1/2 (0.376 mi.)	38	72
JACKSON GAS CO	703 AIRLINE DRIVE	SSE 1/2 - 1 (0.800 mi.)	57	90

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:
There were no unmapped sites in this report.

OVERVIEW MAP - 2525346.1s



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

⚙ Manufactured Gas Plants

🏠 National Priority List Sites

🏠 Dept. Defense Sites

🏠 Indian Reservations BIA

🏠 Oil & Gas pipelines

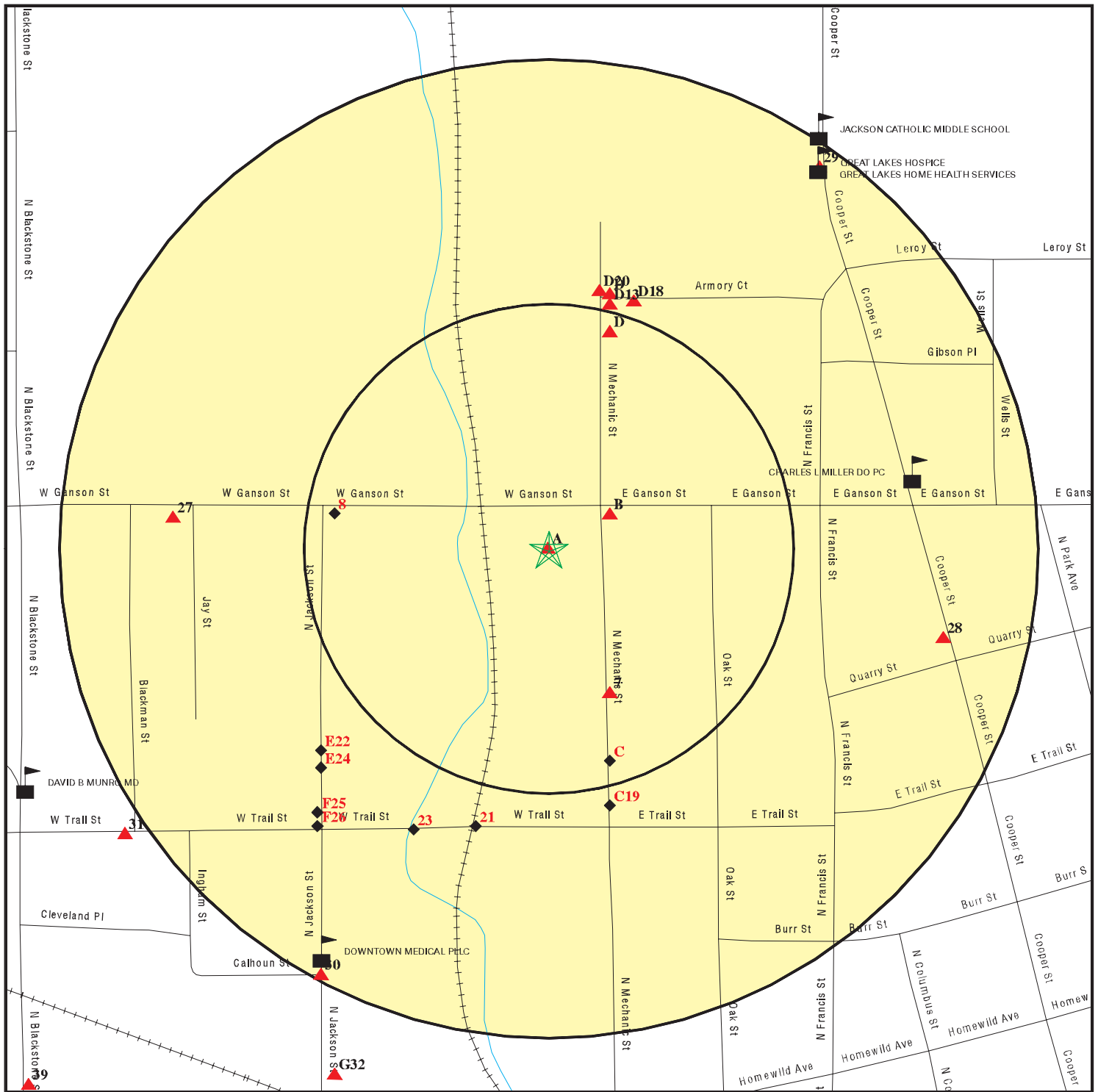
🏠 National Wetland Inventory

🏠 State Wetlands

SITE NAME: 546 N. Mechanic Street
ADDRESS: 546 N. Mechanic Street
Jackson MI 49201
LAT/LONG: 42.2544 / 84.4066

CLIENT: Applied Science & Technology
CONTACT: Shawn Shadley
INQUIRY #: 2525346.1s
DATE: June 23, 2009 11:02 am

DETAIL MAP - 2525346.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ⚙ Manufactured Gas Plants
- 🏠 Sensitive Receptors
- 🚚 National Priority List Sites
- 🚚 Dept. Defense Sites

Indian Reservations BIA
Oil & Gas pipelines

A number line representing distance in miles. The line starts at 0 and ends at 1/4. There are tick marks at 0, 1/16, 1/8, and 1/4. The segment between 1/16 and 1/8 is highlighted in yellow.



SITE NAME: 546 N. Mechanic Street
ADDRESS: 546 N. Mechanic Street
JACKSON MI 49201
LAT/LONG: 42.2544 / 84.4066

CLIENT: Applied Science & Technology
CONTACT: Shawn Shadley
INQUIRY #: 2525346.1s
DATE: June 23, 2009 11:02 am

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL		1.000	0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS		0.500	0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS		1.000	0	0	0	1	NR	1
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG	X	0.250	0	1	NR	NR	NR	1
RCRA-CESQG		0.250	0	1	NR	NR	NR	1
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS		TP	NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
SHWS		1.000	1	2	1	10	NR	14
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF		0.500	0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	X	0.500	2	3	7	NR	NR	12
INDIAN LUST		0.500	0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
UST	X	0.250	3	5	NR	NR	NR	8
AST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
AUL		0.500	0	0	1	NR	NR	1
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	2	0	1	NR	NR	3
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	1	2	2	NR	NR	5
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
HIST LF		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
DEL SHWS	1.000		0	0	1	1	NR	2
CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen	0.250		3	5	NR	NR	NR	8
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
BEA	X	0.500	1	3	8	NR	NR	12
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	1.000	0	0	1	1	NR	2
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A1
Target
Property

JACK SMITH BEVERAGES
546 N MECHANIC ST
JACKSON, MI 49201

LUST
UST
BEA

U000256128
N/A

Site 1 of 2 in cluster A

Actual:
927 ft.

LUST:

Facility ID: 00034126
Source: STATE OF MICHIGAN
Owner Name: Jack Smith Beverages
Owner Address: 2403 E High St
Owner City,St,Zip: Jackson, MI 49203-3421
Owner Contact: Not reported
Owner Phone: (517) 782-7191
Country: USA
District: Jackson District Office
Site Name: Jack Smith Beverages
Latitude: 42.2533860000
Longitude: -84.4062590000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-0679-94
Release Date: Jul 1 1994
Substance Released: Gasoline
Release Status: Closed
Release Closed Date: Jan 5 2000

Leak Number: C-2286-90
Release Date: Nov 5 1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: Jan 5 2000

UST:

Facility ID: 00034126
Facility Type: CLOSED
Latitude: 42.2533860000
Longitude: -84.4062590000
Owner Name: Jack Smith Beverages
Owner Address: 2403 E High St
Owner City,St,Zip: Jackson, MI 49203-3421
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 782-7191
Contact: LARRY O DUANN
Contact Phone: (517) 782-7191
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JACK SMITH BEVERAGES (Continued)

U000256128

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 2000
Install Date: Jan 1 1979
Product: Diesel
Remove Date: May 29 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Suction: Valve at Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: **Removed from Ground**
Capacity: 2000
Install Date: Jan 1 1979
Product: Diesel
Remove Date: May 29 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Suction: Valve at Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
Tank Status: **Removed from Ground**
Capacity: 1500
Install Date: Not reported
Product: Gasoline
Remove Date: Jul 1 1994
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

BEA:

Secondary Address: Not reported
BEA Number: 386
District: Jackson
Date Received: 8/16/2002 12:59:00 AM
Submitter Name: Quality Transmission Parts
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: massonp
Division Assigned: Storage Tank Division

Secondary Address: Not reported
BEA Number: 385
District: Jackson

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JACK SMITH BEVERAGES (Continued)

U000256128

Date Received: 8/16/2002 12:59:00 AM
Submitter Name: Randy Pierce
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: massonp
Division Assigned: Storage Tank Division

A2 **QUALITY TRANSMISSION PARTS CO LLC**
Target **546 N MECHANIC ST**
Property **JACKSON, MI 49201**

RCRA-SQG **1000530386**
FINDS **MID985628965**

Site 2 of 2 in cluster A

Actual:
927 ft.

RCRA-SQG:
Date form received by agency: 03/17/2005
Facility name: QUALITY TRANSMISSION PARTS CO LLC
Facility address: 546 N MECHANIC ST
JACKSON, MI 49201
EPA ID: MID985628965
Contact: RANDY PIERCE
Contact address: 546 N MECHANIC ST
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 789-9120
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: RANDY PIERCE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/01/2002
Owner/Op end date: Not reported

Owner/operator name: QUALITY TRANSMISSION PARTS PROPERTIES LL
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/01/2002
Owner/Op end date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

QUALITY TRANSMISSION PARTS CO LLC (Continued)

1000530386

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 12/31/2001
Facility name: QUALITY TRANSMISSION PARTS CO LLC
Classification: Small Quantity Generator

Date form received by agency: 11/18/1991
Facility name: QUALITY TRANSMISSION PARTS CO LLC
Classification: Small Quantity Generator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

QUALITY TRANSMISSION PARTS CO LLC (Continued)

1000530386

Date form received by agency: 01/01/1980
Facility name: QUALITY TRANSMISSION PARTS CO LLC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003665613

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

B3
ENE
< 1/8
0.036 mi.
191 ft.

101 E GANSON
JACKSON CITY, MI
Site 1 of 4 in cluster B

BEA S107466492
N/A

Relative:
Higher

BEA:
Secondary Address: Not reported
BEA Number: 134
District: Jackson
Date Received: 4/30/1998
Submitter Name: Brian & Greg Denison
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: temppm
Division Assigned: Storage Tank Division

Actual:
931 ft.

B4
ENE
< 1/8
0.036 mi.
191 ft.

ARMORY PARK ARTS PROJECT
600-626 N. MECHANIC ST.
JACKSON, MI 49201
Site 2 of 4 in cluster B

US BROWNFIELDS S1007266507
N/A

Relative:
Higher

US BROWNFIELDS:
Recipient name: Jackson County
Project name: Jackson County, MI
Property name: Armory Park Arts Project
Parcel #: Not reported
Parcel size: Not reported
Latitude: 42.25504
Longitude: -84.405799
Region: 5
HCM label: Address Matching-House Number
Map scale: 100000
Point of reference: Entrance Point of a Facility or Station
Datum: North American Datum of 1983

Actual:
931 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARMORY PARK ARTS PROJECT (Continued)

1007266507

ACRES property ID: 12071
Start date: 3/31/2003
Completed date: 3/31/2003
Accomplishment type: Phase I Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Not reported
Current use: Humane Society
Current owner: Not reported
Future use: Affordable Living/Work Space for Artists
Past use flag: Not reported
Future use flag: Not reported
Cleanup required: Not reported
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: Not reported
Photo available: Not reported
Usage type: Not reported
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Unknown
IC required flag: Not reported
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Not reported
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
PAHs found: Not reported
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Not reported
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Not reported
Soil cleaned up: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARMORY PARK ARTS PROJECT (Continued)

1007266507

Surface water affected: Not reported
Surface water cleaned: Not reported
Unknown found: Not reported
Unknown cleaned: Not reported
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported

Property Description: Industrial and Mechanical Manufacturing

**B5
ENE
< 1/8
0.036 mi.
191 ft.**

**ACME INDUSTRIES
600-626 N MECHANIC ST
JACKSON, MI 49201**

**SHWS S108632540
N/A**

Site 3 of 4 in cluster B

**Relative:
Higher**

SHWS:

Facility ID: 38000374
Source: Not reported
SAM Score: 42 out of 48
SAM Score Date: 07/27/2005
Township: 02S
Range: 01W
Section: 34
Quarter: Not reported
Quarter/Quarter: Not reported
Facility Status: Evaluation conducted
Pollutant(s): Not reported

**B6
ENE
< 1/8
0.036 mi.
191 ft.**

**HITCHES & MORE
101 E GANSON ST
JACKSON, MI**

**BROWNFIELDS S107135800
N/A**

Site 4 of 4 in cluster B

**Relative:
Higher**

BROWNFIELD:

Facility ID: 50002545
Region: 1
Status: Closed LP
Property Use: Not reported
BEA: Not reported
Ernie Id Number: 38000368
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Photo

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

7
SSE
< 1/8
0.079 mi.
420 ft.

LINEAR AUTO-MATICS SYSTEMS CO
543 N MECHANIC ST
JACKSON, MI 49201

FINDS
UST
RCRA-NonGen

1000200168
MID050618537

Relative:
Equal

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
927 ft.

Registry ID: 110003595949

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UST:

Facility ID: 00012725
Facility Type: CLOSED
Latitude: 42.2533110000
Longitude: -84.4058850000
Owner Name: Linear Automatic Syst Co
Owner Address: 543 N Mechanic St
Owner City,St,Zip: Jackson, MI 49201-1308
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 787-5444
Contact: MEL JONES
Contact Phone: (517) 787-5444
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 3000
Install Date: Apr 24 1981
Product: BIODEGRAD/COOLANT
Remove Date: May 1 1998
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

RCRA-NonGen:

Date form received by agency: 09/04/1981
Facility name: LINEAR AUTO-MATICS SYSTEMS CO
Facility address: 543 N MECHANIC ST

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LINEAR AUTO-MATICS SYSTEMS CO (Continued)

1000200168

JACKSON, MI 49201
EPA ID: MID050618537
Mailing address: 5663 E 9 MILE RD
WARREN, MI 48091
Contact: DALE LOY
Contact address: 543 N MECHANIC ST
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 787-5444
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: DAS GROUP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 11/04/1999
Owner/Op end date: Not reported

Owner/operator name: DAS GROUP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 11/04/1999
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LINEAR AUTO-MATICS SYSTEMS CO (Continued)

1000200168

Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 06/12/1986
Date achieved compliance: 06/30/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/19/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 06/12/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/30/1986
Evaluation lead agency: State

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

8
West
< 1/8
0.111 mi.
585 ft.

JACKSON COUNTY FAIRGROUNDS
200 W GANSON ST
JACKSON, MI 49201

LUST **U001148446**
UST **N/A**

Relative:
Lower

LUST:

Facility ID: 00037076
Source: STATE OF MICHIGAN
Owner Name: Jackson County Fairgrounds
Owner Address: 200 W Ganson St
Owner City,St,Zip: Jackson, MI 49201-1217
Owner Contact: Not reported
Owner Phone: (517) 788-4405
Country: USA
District: Jackson District Office
Site Name: Jackson County Fairgrounds
Latitude: 42.2547520000
Longitude: -84.4090350000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-0193-93
Release Date: Jan 29 1993
Substance Released: Gasoline
Release Status: Closed
Release Closed Date: May 18 2005

UST:

Facility ID: 00037076
Facility Type: CLOSED
Latitude: 42.2547520000
Longitude: -84.4090350000
Owner Name: Jackson County Fairgrounds
Owner Address: 200 W Ganson St
Owner City,St,Zip: Jackson, MI 49201-1217
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 788-4405
Contact: MR HERM GUMPER
Contact Phone: (517) 788-4405
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 500
Install Date: Not reported
Product: Gasoline

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JACKSON COUNTY FAIRGROUNDS (Continued)

U001148446

Remove Date: Aug 8 1993
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

C9
SSE
< 1/8
0.113 mi.
595 ft.

MICHNER PLATING CO
520-536 N MECHANIC ST
JACKSON, MI 49201

Site 1 of 3 in cluster C

Relative:
Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
925 ft.

Registry ID: 110000409692

FINDS **1000242943**
RCRA-NonGen **MID005499116**

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency: 12/29/2007
Facility name: MICHNER PLATING CO
Facility address: 520-536 N MECHANIC ST
JACKSON, MI 49201
EPA ID: MID005499116
Contact: JASON MICHNER
Contact address: 520-536 N MECHANIC ST
JACKSON, MI 49201

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Contact country: Not reported
Contact telephone: (517) 782-7151
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: MICHNER PLATING COMPANY
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/25/1980
Owner/Op end date: Not reported

Owner/operator name: MICHNER PLATING COMPANY
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/25/1980
Owner/Op end date: Not reported

Owner/operator name: NAME NOT REPORTED
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: CORPORATION
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1901
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	Batteries
Accumulated waste on-site:	Unknown
Generated waste on-site:	Unknown

Waste type:	Lamps
Accumulated waste on-site:	Unknown
Generated waste on-site:	Unknown

Waste type:	Pesticides
Accumulated waste on-site:	Unknown
Generated waste on-site:	Unknown

Waste type:	Thermostats
Accumulated waste on-site:	Unknown
Generated waste on-site:	Unknown

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Historical Generators:

Date form received by agency: 05/10/2006

Facility name: MICHNER PLATING CO

Classification: Not a generator, verified

Date form received by agency: 03/01/2006

Facility name: MICHNER PLATING CO

Classification: Large Quantity Generator

Date form received by agency: 04/29/2004

Facility name: MICHNER PLATING CO

Classification: Not a generator, verified

Date form received by agency: 03/01/2004

Facility name: MICHNER PLATING CO

Classification: Large Quantity Generator

Date form received by agency: 04/23/2002

Facility name: MICHNER PLATING CO

Classification: Not a generator, verified

Date form received by agency: 03/01/2002

Facility name: MICHNER PLATING CO

Classification: Large Quantity Generator

Date form received by agency: 03/01/2000

Facility name: MICHNER PLATING CO

Classification: Large Quantity Generator

Date form received by agency: 03/01/2000

Facility name: MICHNER PLATING CO

Classification: Not a generator, verified

Date form received by agency: 09/29/1998

Facility name: MICHNER PLATING CO

Classification: Not a generator, verified

Date form received by agency: 03/02/1998

Facility name: MICHNER PLATING CO

Site name: MICHNER PLATING COMPANY

Classification: Large Quantity Generator

Date form received by agency: 02/19/1996

Facility name: MICHNER PLATING CO

Site name: MICHNER PLATING COMPANY

Classification: Large Quantity Generator

Date form received by agency: 02/01/1994

Facility name: MICHNER PLATING CO

Site name: MICHNER PLATING COMPANY

Classification: Large Quantity Generator

Date form received by agency: 02/04/1992

Facility name: MICHNER PLATING CO

Site name: MICHNER PLATING CO.

Classification: Large Quantity Generator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Date form received by agency: 02/23/1990
Facility name: MICHNER PLATING CO
Classification: Large Quantity Generator

Date form received by agency: 07/25/1980
Facility name: MICHNER PLATING CO
Classification: Not a generator, verified

Biennial Reports:

Last Biennial Reporting Year: 2007

Annual Waste Handled:

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 33438.8

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.
Amount (Lbs): 33438.8

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Not reported
Date violation determined: Not reported
Date achieved compliance: Not reported
Violation lead agency: Not reported
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 06/22/2006
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 06/22/2006
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: State Statute or Regulation
Date violation determined: 06/22/2006
Date achieved compliance: Not reported
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 299.9306(1)d'
Area of violation: Generators - General
Date violation determined: 04/21/2004
Date achieved compliance: 07/13/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/21/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 299.9306(1)d
Area of violation: Generators - General
Date violation determined: 04/21/2004
Date achieved compliance: 07/13/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/21/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 299.9305(1)e

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Area of violation: Generators - General
Date violation determined: 04/21/2004
Date achieved compliance: 07/13/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/21/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 299.9306(1)(a)i
Area of violation: Generators - General
Date violation determined: 04/21/2004
Date achieved compliance: 07/13/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/21/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 299.9810(3)
Area of violation: Used Oil - Definitions
Date violation determined: 04/21/2004
Date achieved compliance: 07/13/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/21/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 10/02/1998
Date achieved compliance: 02/03/1999
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/02/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Manifest

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Date violation determined: 09/02/1994
Date achieved compliance: 05/05/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/02/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 09/02/1994
Date achieved compliance: 05/04/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/02/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/02/1994
Date achieved compliance: 05/05/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/02/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 11/29/1989
Date achieved compliance: 04/19/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/04/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 11/29/1989

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Date achieved compliance: 04/19/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/04/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/26/1985
Date achieved compliance: 07/09/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/07/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/26/1985
Date achieved compliance: 07/09/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/06/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 05/17/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/31/2006
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Generators - General
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/31/2006
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Generators - Pre-transport
Date achieved compliance: Not reported
Evaluation lead agency: State

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Evaluation date: 06/22/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/22/2006
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: State Statute or Regulation
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/09/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Used Oil - Definitions
Date achieved compliance: 07/13/2004
Evaluation lead agency: EPA

Evaluation date: 09/09/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/13/2004
Evaluation lead agency: EPA

Evaluation date: 02/03/1999
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/03/1999
Evaluation lead agency: State

Evaluation date: 09/29/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/03/1999
Evaluation lead agency: State

Evaluation date: 05/05/1995
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/04/1995
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MICHNER PLATING CO (Continued)

1000242943

Date achieved compliance: 05/04/1995
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Manifest
Date achieved compliance: 05/05/1995
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/22/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/05/1995
Evaluation lead agency: State

Evaluation date: 11/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 04/19/1990
Evaluation lead agency: State

Evaluation date: 11/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/19/1990
Evaluation lead agency: State

Evaluation date: 04/26/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/09/1985
Evaluation lead agency: State

Evaluation date: 02/26/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

C10
SSE
< 1/8
0.113 mi.
595 ft.

M & L PLATING CO
520-530 N MECHANIC
JACKSON, MI 49201

Site 2 of 3 in cluster C

Relative:
Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
925 ft.

Registry ID: 110003582374

FINDS **1000121715**
RCRA-NonGen **MID005499033**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

M & L PLATING CO (Continued)

1000121715

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency: 09/09/2003
Facility name: M & L PLATING CO
Facility address: 520-530 N MECHANIC
JACKSON, MI 49201
EPA ID: MID005499033
Mailing address: 520-36 N. MECHANIC ST
JACKSON, MI 49201
Contact: JOE MICHNER
Contact address: 520-530 N MECHANIC
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 782-7151
Contact email: Not reported
EPA Region: 05
Land type: Other land type
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 09/10/2003
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 09/10/2003
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

M & L PLATING CO (Continued)

1000121715

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 07/24/1980
Facility name: M & L PLATING CO
Classification: Not a generator, verified

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 10/25/1985
Date achieved compliance: 03/20/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/01/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

M & L PLATING CO (Continued)

1000121715

Evaluation Action Summary:

Evaluation date: 10/25/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 03/20/1986
Evaluation lead agency: State

**D11
NNE
< 1/8
0.116 mi.
611 ft.**

**GOODWILL IND OF CENTRAL MICHIGAN
617 N MECHANIC ST
JACKSON, MI 49202
Site 1 of 9 in cluster D**

**LUST U000256139
UST N/A**

**Relative:
Higher**

LUST:

Facility ID: 00016277
Source: STATE OF MICHIGAN
Owner Name: Goodwill Ind Of Central Michigan
Owner Address: 617 N Mechanic St
Owner City,St,Zip: Jackson, MI 49202-3342
Owner Contact: Not reported
Owner Phone: (517) 787-0570
Country: USA
District: Jackson District Office
Site Name: Goodwill Industries #1
Latitude: 42.2549610000
Longitude: -84.4058770000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

**Actual:
938 ft.**

Leak Number: C-0402-85
Release Date: Sep 17 1991
Substance Released: Not reported
Release Status: Closed
Release Closed Date: Oct 9 2001

Leak Number: C-2613-91
Release Date: Dec 10 1991
Substance Released: Unknown
Release Status: Closed
Release Closed Date: Oct 9 2001

UST:

Facility ID: 00016277
Facility Type: CLOSED
Latitude: 42.2549610000
Longitude: -84.4058770000
Owner Name: Goodwill Ind Of Central Michigan
Owner Address: 617 N Mechanic St
Owner City,St,Zip: Jackson, MI 49202-3342
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 787-0570
Contact: JUDITH A DOAN
Contact Phone: (517) 787-0570

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GOODWILL IND OF CENTRAL MICHIGAN (Continued)

U000256139

Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Apr 18 1966
Product: Gasoline
Remove Date: Jan 6 1992
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

D12
NNE
< 1/8
0.116 mi.
611 ft.

GOODWILL INDUSTRIES
617 N MECHANIC ST
JACKSON, MI
Site 2 of 9 in cluster D

BROWNFIELDS **S107136000**
N/A

Relative:
Higher

BROWNFIELD:

Facility ID: 00016277
Region: 1
Status: Closed LP
Property Use: Not reported
BEA: Not reported
Ernie Id Number: 38000178
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Photo

Actual:
938 ft.

D13
NNE
1/8-1/4
0.129 mi.
682 ft.

WEATHERWAX FOUNDATION ACME IND BLDG
618 N MECHANIC
JACKSON, MI 49202

FINDS **1004725805**
RCRA-NonGen **MIR000100792**

Site 3 of 9 in cluster D

Relative:
Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
939 ft.

Registry ID: 110003716337

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WEATHERWAX FOUNDATION ACME IND BLDG (Continued)

1004725805

RCRA-NonGen:

Date form received by agency: 03/01/2002
Facility name: WEATHERWAX FOUNDATION ACME IND BLDG
Facility address: 618 N MECHANIC
JACKSON, MI 49202
EPA ID: MIR000100792
Mailing address: P O BOX 1111
JACKSON, MI 49204
Contact: LAEL SWOPE
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (517) 787-2117
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2002
Owner/Op end date: Not reported

Owner/operator name: WEATHERWAX FOUNDATION
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 04/29/1992
Owner/Op end date: Not reported

Owner/operator name: WEATHERWAX INVESTMENTS
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/31/1943
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WEATHERWAX FOUNDATION ACME IND BLDG (Continued)

1004725805

Owner/Op start date: 01/01/2002
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: Unknown
Used oil processor: Unknown
Used oil refiner: Unknown
Used oil fuel marketer to burner: Unknown
Used oil Specification marketer: Unknown
Used oil transfer facility: Unknown
Used oil transporter: Unknown
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: Unknown
Generated waste on-site: Unknown

Waste type: Lamps
Accumulated waste on-site: Unknown

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WEATHERWAX FOUNDATION ACME IND BLDG (Continued)

1004725805

Generated waste on-site: Unknown

Waste type: Pesticides

Accumulated waste on-site: Unknown

Generated waste on-site: Unknown

Waste type: Thermostats

Accumulated waste on-site: Unknown

Generated waste on-site: Unknown

Historical Generators:

Date form received by agency: 12/31/2001

Facility name: WEATHERWAX FOUNDATION ACME IND BLDG

Classification: Not a generator, verified

Date form received by agency: 12/30/2001

Facility name: WEATHERWAX FOUNDATION ACME IND BLDG

Classification: Not a generator, verified

Date form received by agency: 11/22/2000

Facility name: WEATHERWAX FOUNDATION ACME IND BLDG

Classification: Not a generator, verified

Date form received by agency: 01/01/1980

Facility name: WEATHERWAX FOUNDATION ACME IND BLDG

Classification: Not a generator, verified

Violation Status: No violations found

D14
NNE
1/8-1/4
0.134 mi.
709 ft.

DEPARTMENT OF MILITARY AFFAIRS
100 ARMORY COURT
JACKSON, MI

SHWS **S107699118**
AIRS **N/A**

Site 4 of 9 in cluster D

Relative:
Higher

SHWS:

Facility ID: 38000108

Source: Not reported

SAM Score: 37 out of 48

SAM Score Date: 03/02/2007

Township: 02S

Range: 01W

Section: 34

Quarter: Not reported

Quarter/Quarter: Not reported

Facility Status: Evaluation in progress

Pollutant(s): Not reported

Actual:
940 ft.

AIRS:

State Registration Number: K3171

Naics Code: Not reported

Contact Name: Not reported

Contact Phone: Not reported

Contact Address: DEPARTMENT OF MILITARY AFFAIRS

Contact Address 2: 2500 S. WASHINGTON AVE.

Contact City,St,Zip: LANSING, MI 48913

Permit Number: 987-85

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DEPARTMENT OF MILITARY AFFAI (Continued)

S107699118

Date Received: 12/19/85
State Registration Number: K3171
Country: Not reported
RID: Not reported
Application Reason: STEAM BOILER
Record Type: Not reported
State County FIPS: Not reported
Facility Category: Not reported
SIC Primary: Not reported
Site Description: Not reported
NTI Site ID: Not reported
Dunn&Bradstreet No: Not reported
TRIID: Not reported
Submission Flag: Not reported
Tribal Code: Not reported
EI Year: Not reported

D15
NNE
1/8-1/4
0.134 mi.
709 ft.

ARMORY
100 ARMORY COURT
JACKSON, MI 49201
Site 5 of 9 in cluster D

US BROWNFIELDS 1009828841
N/A

Relative:
Higher

US BROWNFIELDS:

Actual:
940 ft.

Recipient name: Jackson County
Project name: Jackson County, MI (A04)
Property name: Armory
Parcel #: 8-2492.0300
Parcel size: 15.00
Latitude: 42.1528
Longitude: -84.2421
Region: 5
HCM label: Thematic Mapper
Map scale: 1:24000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 28161
Start date: 7/1/2006
Completed date: 7/1/2006
Accomplishment type: Phase I Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Private
Current use: Not reported
Current owner: The Enterprise Group of Jackson, Inc.
Future use: Not reported
Past use flag: Not reported
Future use flag: Yes
Cleanup required: No
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: No
Photo available: Yes
Usage type: Greenspace
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARMORY (Continued)

1009828841

IC in place flag: Unknown
IC required flag: Unknown
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Yes
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Yes
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Yes
Other metals cleaned: Not reported
PAHs found: Yes
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Yes
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Yes
Soil cleaned up: Not reported
Surface water affected: Not reported
Surface water cleaned: Not reported
Unknown found: Not reported
Unknown cleaned: Not reported
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Yes
VOCs cleaned: Not reported

Recipient name: Jackson County
Project name: Jackson County, MI (A04)
Property name: Armory
Parcel #: 8-2492.0300
Parcel size: 15.00
Latitude: 42.1528
Longitude: -84.2421
Region: 5
HCM label: Thematic Mapper
Map scale: 1:24000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 28161

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARMORY (Continued)

1009828841

Start date: 7/1/2006
Completed date: 7/1/2006
Accomplishment type: Phase II Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Private
Current use: Not reported
Current owner: The Enterprise Group of Jackson, Inc.
Future use: Not reported
Past use flag: Not reported
Future use flag: Yes
Cleanup required: No
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: No
Photo available: Yes
Usage type: Greenspace
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Unknown
IC required flag: Unknown
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Yes
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Yes
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Yes
Other metals cleaned: Not reported
PAHs found: Yes
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Yes
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Yes
Soil cleaned up: Not reported
Surface water affected: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARMORY (Continued)

1009828841

Surface water cleaned: Not reported
Unknown found: Not reported
Unknown cleaned: Not reported
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Yes
VOCs cleaned: Not reported

Property Description: The property was developed in the 1800s as the State of Michigan's first prison. The property was subsequently used by the State of Michigan as an armory.

D16
NNE
1/8-1/4
0.134 mi.
709 ft.

MI DEPT/MILITARY & VETERANS AFFAIRS
100 ARMORY CT
JACKSON, MI 49202
Site 6 of 9 in cluster D

FINDS **1000272735**
LUST **MID981798838**
UST
RCRA-NonGen
MANIFEST

Relative:
Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
940 ft.

Registry ID: 110003624383

Not reported

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:

Facility ID: 00009776
Source: STATE OF MICHIGAN
Owner Name: MDMVA - Dept of Military & Veterans Affairs
Owner Address: 3423 N Martin Luther King Blvd
Owner City,St,Zip: Lansing, MI 48906
Owner Contact: Gary Hoffmaster
Owner Phone: (517) 483-5627
Country: USA
District: Jackson District Office
Site Name: Jackson Armory
Latitude: 42.2563600000
Longitude: -84.4058870000
Date of Collection: 01-12-1998
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off
Accuracy: 10
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-0494-93
Release Date: May 5 1993
Substance Released: Gasoline,Unknown
Release Status: Closed

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/MILITARY & VETERANS AFFAIRS (Continued)

1000272735

Release Closed Date: Mar 22 1996

Leak Number: C-1084-91
Release Date: Jun 26 1991
Substance Released: Diesel,Unknown
Release Status: Closed
Release Closed Date: Mar 22 1996

Leak Number: C-1461-90
Release Date: Aug 8 1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: Mar 22 1996

UST:

Facility ID: 00009776
Facility Type: CLOSED
Latitude: 42.2563600000
Longitude: -84.4058870000
Owner Name: MDMVA - Dept of Military & Veterans Affairs
Owner Address: 3423 N Martin Luther King Blvd
Owner City,St,Zip: Lansing, MI 48906
Owner Country: USA
Owner Contact: Gary Hoffmaster
Owner Phone: (517) 483-5627
Contact: Sgt Stacey
Contact Phone: (517) 780-4190
Date of Collection: 01-12-1998
Accuracy: 10
Accuracy Value Unit: METERS
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off

Tank ID: DMA124
Tank Status: Removed from Ground
Capacity: 3000
Install Date: Apr 8 1979
Product: Gasoline
Remove Date: May 5 1993
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Unknown
Piping Type: Suction: Valve at Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: DMA216
Tank Status: Removed from Ground
Capacity: 10000
Install Date: Apr 7 1974
Product: Diesel
Remove Date: Jun 6 1991
Tank Release Detection: Not reported
Pipe Release Detection: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/MILITARY & VETERANS AFFAIRS (Continued)

1000272735

Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: DMA235
Tank Status: Removed from Ground
Capacity: 2000
Install Date: Jul 15 1993
Product: Diesel
Remove Date: May 17 2006
Tank Release Detection: Automatic Tank Gauging, Inter Monitoring/Second Containment, Inventory Control, Tank Tightness Testing, Vapor Monitoring
Pipe Release Detection: Not reported
Piping Material: Double Walled, Fiberglass reinforced plastic
Piping Type: Suction: No Valve At Tank
Constr Material: Double Walled
Impressed Device: No

Tank ID: DMA404
Tank Status: Removed from Ground
Capacity: 3000
Install Date: Jan 1 1965
Product: Not reported
Remove Date: Feb 1 1990
Tank Release Detection: Tank Tightness Testing
Pipe Release Detection: Line Tightness Testing
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: DMA405
Tank Status: Removed from Ground
Capacity: 3000
Install Date: Jan 1 1965
Product: Not reported
Remove Date: Feb 15 1990
Tank Release Detection: Tank Tightness Testing
Pipe Release Detection: Line Tightness Testing
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

RCRA-NonGen:

Date form received by agency: 12/15/2006
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Facility address: 100 ARMORY CT
JACKSON, MI 49202
EPA ID: MID981798838
Mailing address: 3423 N MARTIN LUTHER KING BLVD
LANSING, MI 48906
Contact: THOMAS PAVLIK

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/MILITARY & VETERANS AFFAIRS (Continued)

1000272735

Contact address: 100 ARMORY CT
JACKSON, MI 49202
Contact country: Not reported
Contact telephone: (517) 481-7634
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/16/2006
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/16/2006
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/MILITARY & VETERANS AFFAIRS (Continued)

1000272735

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 03/15/2006
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Classification: Not a generator, verified

Date form received by agency: 03/30/2005
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Classification: Not a generator, verified

Date form received by agency: 06/09/2004
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Classification: Not a generator, verified

Date form received by agency: 08/08/2002
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Classification: Not a generator, verified

Date form received by agency: 12/29/1986
Facility name: MI DEPT/MILITARY & VETERANS AFFAIRS
Classification: Not a generator, verified

Violation Status: No violations found

WI MANIFEST:

Year: 04
EPA ID: MID981798838
FID: 0
ACT Code: 202
ACT Status: A
ACT Code 1: 202
ACT Name: HW Generator - Small
Contact First Name: Not reported
Contact Last Name: Not reported
Contact Title: Not reported
Contact Address: Not reported
Contact State: Not reported
Contact City: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/MILITARY & VETERANS AFFAIRS (Continued)

1000272735

Contact Zip: Not reported
Contact Telephone: Not reported
Contact Extention: Not reported
Contact Email Address: Not reported
WI MANIFEST SHIP: -
Manifest DOC ID: 0
Copy Type: 3
Gen EPA ID: MID981798838
Gen Date: 12/16/2004
TSD Date: 12/17/2004
TSD EPA ID: WID988580056
GEN Copy Revd Date: 3/4/2005
TSG Copy Revd Date: 03/10/2005
Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

WI MANIFEST TRANS: -
Mifest DOC ID: Not reported
TRAN EPA ID: Not reported
TRAN ORDER NO: Not reported
TRAN Date: Not reported

Manifest DOC ID: Not reported
Waste Page No: Not reported
Waste Line No: Not reported
Waste Code: Not reported
Waste Amount: Not reported
Unit of Measure: Not reported
Waste LBS: Not reported

D17
NNE
1/8-1/4
0.134 mi.
709 ft.

ARMORY ARTS
100 ARMORY COURT
JACKSON CITY, MI

Site 7 of 9 in cluster D

BEA S108084302
N/A

Relative:
Higher

BEA:

Actual:
940 ft.

Secondary Address: Not reported
BEA Number: 758
District: Jackson
Date Received: 7/17/2006 12:59:00 AM
Submitter Name: Excel-Artswalk LDHA LP
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: katkov
Division Assigned: Environmental Response Division

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

D18
NNE
1/8-1/4
0.134 mi.
710 ft.
BENDER AND LOUDON MOTOR FREIGHT INC
115 ARMORY CT
JACKSON, MI 49202
Site 8 of 9 in cluster D

FINDS
RCRA-NonGen
1000187833
MID000772426

Relative:
Higher
FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
940 ft.
Registry ID: 110003577068

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency: 11/19/1980
Facility name: BENDER AND LOUDON MOTOR FREIGHT INC
Facility address: 115 ARMORY CT
JACKSON, MI 49202
EPA ID: MID000772426
Mailing address: 115 ARMORY COURT
JACKSON, MI 49202
Contact: STEVE BING
Contact address: 115 ARMORY CT
JACKSON, MI 49202
Contact country: Not reported
Contact telephone: (517) 784-9195
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: BENDER AND LOUDON MOTOR FREIGHT INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: BENDER AND LOUDON MOTOR FREIGHT INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BENDER AND LOUDON MOTOR FREIGHT INC (Continued)

1000187833

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 09/09/1980
Facility name: BENDER AND LOUDON MOTOR FREIGHT INC
Classification: Not a generator, verified

Violation Status: No violations found

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

C19
SSE
1/8-1/4
0.135 mi.
711 ft.
SALCO ENG & MFG
506 N MECHANIC ST
JACKSON, MI 49201
Site 3 of 3 in cluster C

UST **U000256118**
N/A

Relative:
Lower

UST:

Actual:
925 ft.

Facility ID: 00015152
Facility Type: CLOSED
Latitude: 42.2525490000
Longitude: -84.4062250000
Owner Name: Salco Eng & Mfg
Owner Address: 506 N Mechanic St
Owner City,St,Zip: Jackson, MI 49201-1309
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 789-9010
Contact: JIM FLACK
Contact Phone: (517) 789-9010
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 500
Install Date: Apr 8 1956
Product: Gasoline
Remove Date: Jul 7 1989
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

D20
North
1/8-1/4
0.135 mi.
712 ft.
ZOERMAN-CLARK
626 N. MECHANIC STREET
JACKSON, MI 49201
Site 9 of 9 in cluster D

US BROWNFIELDS **1011860220**
N/A

Relative:
Higher

US BROWNFIELDS:

Actual:
939 ft.

Recipient name: Jackson, City of
Project name: Jackson, MI (A04)
Property name: Zoerman-Clark
Parcel #: 8-236.3000, 8-2368.4000, 8-23680000
Parcel size: 1.30
Latitude: 42.255833
Longitude: -84.406111
Region: 5
HCM label: Global Positioning Method-Unspecified Parameters
Map scale: IM/Pixal
Point of reference: Entrance Point of a Facility or Station
Datum: North American Datum of 1983

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ZOERMAN-CLARK (Continued)

1011860220

ACRES property ID: 70721
Start date: 6/6/2006
Completed date: 6/6/2006
Accomplishment type: Phase I Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Private
Current use: Not reported
Current owner: Artspace Jackson, LLC
Future use: Not reported
Past use flag: Yes
Future use flag: Not reported
Cleanup required: No
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: Not reported
Photo available: Not reported
Usage type: Industrial
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Not reported
IC required flag: No
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Not reported
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Yes
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
PAHs found: Yes
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Not reported
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Yes
Soil cleaned up: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ZOERMAN-CLARK (Continued)

1011860220

Surface water affected:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
Unknown cleaned:	Not reported
Unknown media:	Not reported
Unknown media cleaned:	Not reported
VOCs found:	Yes
VOCs cleaned:	Not reported
Recipient name:	Jackson, City of
Project name:	Jackson, MI (A04)
Property name:	Zoerman-Clark
Parcel #:	8-236.3000, 8-2368.4000, 8-23680000
Parcel size:	1.30
Latitude:	42.255833
Longitude:	-84.406111
Region:	5
HCM label:	Global Positioning Method-Unspecified Parameters
Map scale:	IM/Pixal
Point of reference:	Entrance Point of a Facility or Station
Datum:	North American Datum of 1983
ACRES property ID:	70721
Start date:	9/26/2007
Completed date:	9/26/2007
Accomplishment type:	Phase I Environmental Assessment
Accomplishment (acres):	Not reported
Ownership entity:	Private
Current use:	Not reported
Current owner:	Artspace Jackson, LLC
Future use:	Not reported
Past use flag:	Yes
Future use flag:	Not reported
Cleanup required:	No
Proprietary controls:	Not reported
Gov. control:	Not reported
Enforcement permit tools:	Not reported
Info. devices:	Not reported
Video available:	Not reported
Photo available:	Not reported
Usage type:	Industrial
Not in state/tribal program:	Not reported
IC data address:	Not reported
IC in place date:	Not reported
IC in place flag:	Not reported
IC required flag:	No
NFA issue date:	Not reported
State and tribal program date:	Not reported
State and tribal program ID:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controlled substance found:	Not reported
Controlled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Yes

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ZOERMAN-CLARK (Continued)

1011860220

Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
None found:	Not reported
None cleaned up:	Not reported
No media found:	Not reported
No media cleaned up:	Not reported
Other found:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
PAHs found:	Yes
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Yes
Soil cleaned up:	Not reported
Surface water affected:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
Unknwon cleaned:	Not reported
Unknown media:	Not reported
Unknown media cleaned:	Not reported
VOCs found:	Yes
VOCs cleaned:	Not reported
Recipient name:	Jackson, City of
Project name:	Jackson, MI (A04)
Property name:	Zoerman-Clark
Parcel #:	8-236.3000, 8-2368.4000, 8-23680000
Parcel size:	1.30
Latitude:	42.255833
Longitude:	-84.406111
Region:	5
HCM label:	Global Positioning Method-Unspecified Parameters
Map scale:	IM/Pixal
Point of reference:	Entrance Point of a Facility or Station
Datum:	North American Datum of 1983
ACRES property ID:	70721
Start date:	10/31/2007
Completed date:	10/31/2007
Accomplishment type:	Phase II Environmental Assessment
Accomplishment (acres):	Not reported
Ownership entity:	Private
Current use:	Not reported
Current owner:	Artspace Jackson, LLC
Future use:	Not reported
Past use flag:	Yes
Future use flag:	Not reported
Cleanup required:	No
Proprietary controls:	Not reported
Gov. control:	Not reported
Enforcement permit tools:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ZOERMAN-CLARK (Continued)

1011860220

Info. devices:	Not reported
Video available:	Not reported
Photo available:	Not reported
Usage type:	Industrial
Not in state/tribal program:	Not reported
IC data address:	Not reported
IC in place date:	Not reported
IC in place flag:	Not reported
IC required flag:	No
NFA issue date:	Not reported
State and tribal program date:	Not reported
State and tribal program ID:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controlled substance found:	Not reported
Controlled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Yes
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
None found:	Not reported
None cleaned up:	Not reported
No media found:	Not reported
No media cleaned up:	Not reported
Other found:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
PAHs found:	Yes
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Yes
Soil cleaned up:	Not reported
Surface water affected:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
Unknown cleaned:	Not reported
Unknown media:	Not reported
Unknown media cleaned:	Not reported
VOCs found:	Yes
VOCs cleaned:	Not reported

Property Description: Property has been an industrial site since the early 1800's until the 1970's. Since then it has been used for various commercial purposes.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

21
SSW
1/8-1/4
0.146 mi.
773 ft.

CONSUMERS ENERGY CO
115 W TRAIL ST
JACKSON, MI 49201

FINDS **1000375528**
RCRA-CESQG **MID981537897**

Relative:
Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
922 ft.

Registry ID: 110003620662

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-CESQG:

Date form received by agency: 09/30/2006
Facility name: CONSUMERS ENERGY CO
Facility address: 115 W TRAIL ST
JACKSON, MI 49201
EPA ID: MID981537897
Mailing address: 1945 W PARNALL RD
JACKSON, MI 49201
Contact: PATRICK ZOMBO
Contact address: 115 W TRAIL ST
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 788-0647
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: CONSUMERS ENERGY CO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CONSUMERS ENERGY CO (Continued)

1000375528

Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: CONSUMERS ENERGY CO
Owner/operator address: Not reported
Not reported

Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CONSUMERS ENERGY CO (Continued)

1000375528

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 08/01/2004
Facility name: CONSUMERS ENERGY CO
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 09/26/2001
Facility name: CONSUMERS ENERGY CO
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 12/15/1993
Facility name: CONSUMERS ENERGY CO
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 08/25/1986
Facility name: CONSUMERS ENERGY CO
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

E22
SW
1/8-1/4
0.155 mi.
820 ft.

524 N JACKSON
JACKSON CITY, MI 49201
Site 1 of 2 in cluster E

BEA S108414376
N/A

Relative:
Lower

BEA:
Secondary Address: & adj parking lots
BEA Number: 800
District: Jackson
Date Received: 2/9/2007 12:59:00 AM
Submitter Name: United Way of Jackson County II LLC
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: katkov
Division Assigned: Environmental Response Division

Actual:
925 ft.

23
SSW
1/8-1/4
0.159 mi.
839 ft.

CONSUMERS ENERGY CO
135 W TRAIL ST
JACKSON, MI 49201

PADS 1000390274
RCRA-SQG MID067329490
FINDS

Relative:
Lower

RCRA-SQG:
Date form received by agency: 03/03/2008
Facility name: CONSUMERS ENERGY CO
Facility address: 135 W TRAIL ST
JACKSON, MI 49201
EPA ID: MID067329490
Mailing address: 1945 W PARNALL RD
JACKSON, MI 49201
Contact: PATRICK ZOMBO

Actual:
921 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CONSUMERS ENERGY CO (Continued)

1000390274

Contact address: 135 W TRAIL ST
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 788-0647
Contact email: Not reported
EPA Region: 05
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CONSUMERS ENERGY CO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: CONSUMERS ENERGY CO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CONSUMERS ENERGY CO (Continued)

1000390274

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 09/30/2005
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Date form received by agency: 04/14/2004
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Date form received by agency: 09/30/2002
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Date form received by agency: 09/26/2001
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Date form received by agency: 02/13/1998
Facility name: CONSUMERS ENERGY CO
Site name: CONSUMERS ENERGY CO., TRAIL ST. FACILITY
Classification: Large Quantity Generator

Date form received by agency: 12/15/1993
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Date form received by agency: 07/21/1986
Facility name: CONSUMERS ENERGY CO
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CONSUMERS ENERGY CO (Continued)

1000390274

Other Pertinent Environmental Activity Identified at Site

Registry ID: 110000852408

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

**E24
SW
1/8-1/4
0.161 mi.
851 ft.**

**JACKSON FIRE DEPT
518 N JACKSON ST
JACKSON, MI 49201**

Site 2 of 2 in cluster E

**LUST UST U000256119
N/A**

**Relative:
Lower**

LUST:

**Actual:
925 ft.**

Facility ID: 00007156
Source: STATE OF MICHIGAN
Owner Name: City Of Jackson Fire Dept
Owner Address: 518 N Jackson St
Owner City,St,Zip: Jackson, MI 49201-1223
Owner Contact: Not reported
Owner Phone: (517) 788-4150
Country: USA
District: Jackson District Office
Site Name: Jackson, City Of, Fire Dept
Latitude: 42.2527900000
Longitude: -84.4090680000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-1470-94
Release Date: Nov 30 1994
Substance Released: Gasoline
Release Status: Open
Release Closed Date: Not reported

Leak Number: C-1591-94
Release Date: Dec 14 1994
Substance Released: Diesel
Release Status: Open
Release Closed Date: Not reported

UST:

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JACKSON FIRE DEPT (Continued)

U000256119

Facility ID: 00007156
Facility Type: ACTIVE
Latitude: 42.2527900000
Longitude: -84.4090680000
Owner Name: City Of Jackson Fire Dept
Owner Address: 518 N Jackson St
Owner City,St,Zip: Jackson, MI 49201-1223
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 788-4150
Contact: MICHAEL HENDGES
Contact Phone: (517) 788-4150
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 2000
Install Date: Mar 5 1978
Product: Gasoline
Remove Date: Nov 30 1994
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: **Currently In Use**
Capacity: 250
Install Date: Mar 5 1978
Product: Used Oil
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
Tank Status: **Removed from Ground**
Capacity: 2000
Install Date: Mar 5 1982
Product: Diesel
Remove Date: Nov 30 1994
Tank Release Detection: Not reported
Pipe Release Detection: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JACKSON FIRE DEPT (Continued)

U000256119

Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

F25
SW
1/8-1/4
0.179 mi.
945 ft.

505 N JACKSON
JACKSON CITY, MI 49201

Site 1 of 2 in cluster F

BEA S107596650
N/A

Relative:
Lower

BEA:

Secondary Address: Not reported
BEA Number: 681
District: Jackson
Date Received: 12/21/2005 12:59:00 AM
Submitter Name: Artisan Park LDHA LP
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: katkov
Division Assigned: Environmental Response Division

Actual:
926 ft.

F26
SW
1/8-1/4
0.184 mi.
973 ft.

ART MOEHN CHEVROLET HONDA GEO
500 N JACKSON ST
JACKSON, MI 49201

Site 2 of 2 in cluster F

LUST U000256115
UST N/A

Relative:
Lower

LUST:

Facility ID: 00002645
Source: STATE OF MICHIGAN
Owner Name: Art Moehn Chevrolet-Honda-Geo
Owner Address: 500 N Jackson St
Owner City,St,Zip: Jackson, MI 49201-1223
Owner Contact: Not reported
Owner Phone: (517) 787-7700
Country: USA
District: Jackson District Office
Site Name: Art Moehn Chevrolet
Latitude: 42.2524090000
Longitude: -84.4090750000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Actual:
926 ft.

Leak Number: C-0057-91
Release Date: Jan 16 1991
Substance Released: Not reported
Release Status: Closed
Release Closed Date: May 22 1995

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ART MOEHN CHEVROLET HONDA GEO (Continued)

U000256115

Leak Number: C-2622-90
Release Date: Dec 10 1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: Jan 14 1998

UST:

Facility ID: 00002645
Facility Type: CLOSED
Latitude: 42.2524090000
Longitude: -84.4090750000
Owner Name: Art Moehn Chevrolet-Honda-Geo
Owner Address: 500 N Jackson St
Owner City,St,Zip: Jackson, MI 49201-1223
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 787-7700
Contact: MARK A. MOEHN
Contact Phone: (517) 787-7700
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 3000
Install Date: May 7 1980
Product: Gasoline
Remove Date: Dec 10 1990
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 2000
Install Date: May 7 1976
Product: Gasoline
Remove Date: Dec 10 1990
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ART MOEHN CHEVROLET HONDA GEO (Continued)

U000256115

Capacity: 500
Install Date: May 7 1968
Product: Used Oil
Remove Date: Dec 10 1990
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

27
West
1/8-1/4
0.192 mi.
1016 ft.

ART MOEHN CHEVROLET
500 N JACKSON
JACKSON, MI 49204

FINDS 1000242884
RCRA-NonGen MID017162439

Relative:
Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
930 ft.

Registry ID: 110003588699

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RCRA-NonGen:

Date form received by agency: 05/01/2002
Facility name: ART MOEHN CHEVROLET
Facility address: 500 N JACKSON
JACKSON, MI 49204
EPA ID: MID017162439
Mailing address: 2200 SEYMOUR RD
JACKSON, MI 49201
Contact: KEN MCCORD
Contact address: 500 N JACKSON
JACKSON, MI 49204
Contact country: Not reported
Contact telephone: (517) 787-7700
Contact email: Not reported
EPA Region: 05
Land type: Other land type
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ART MOEHN CHEVROLET (Continued)

1000242884

Owner/Op start date: 05/02/2002
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/02/2002
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ART MOEHN CHEVROLET (Continued)

1000242884

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 04/03/2002
Facility name: ART MOEHN CHEVROLET
Classification: Not a generator, verified

Date form received by agency: 12/31/2001
Facility name: ART MOEHN CHEVROLET
Classification: Not a generator, verified

Date form received by agency: 03/09/1987
Facility name: ART MOEHN CHEVROLET
Classification: Not a generator, verified

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/27/1991
Date achieved compliance: 11/20/1992
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/05/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 06/29/1989
Date achieved compliance: 08/27/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/20/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 08/27/1991
Evaluation: FOLLOW-UP INSPECTION
Area of violation: Generators - General
Date achieved compliance: 11/20/1992
Evaluation lead agency: State

Evaluation date: 06/29/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ART MOEHN CHEVROLET (Continued)

1000242884

Date achieved compliance: 08/27/1991
Evaluation lead agency: State

28
ESE
1/8-1/4
0.207 mi.
1091 ft.

#4 UNITED (TULSA OIL CORP)
405 S MILWAUKEE
JACKSON, MI 46268

UST **U003211435**
N/A

Relative:
Higher

UST:

Actual:
938 ft.

Facility ID: 00011903
Facility Type: CLOSED
Latitude: 42.2510440000
Longitude: -84.4015980000
Owner Name: RI Marketing Inc
Owner Address: Po Box 68401
Owner City,St,Zip: Indianapolis, IN 46268-0401
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (317) 875-8500
Contact: GARY M. CAMPBELL
Contact Phone: (317) 875-8500
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 20000
Install Date: May 2 1959
Product: Gasoline,REGULAR,8
Remove Date: Jan 1 1979
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: **Removed from Ground**
Capacity: 20000
Install Date: May 2 1959
Product: Gasoline,UNLEADED,8
Remove Date: Jan 1 1979
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

#4 UNITED (TULSA OIL CORP) (Continued)

U003211435

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 11000
Install Date: May 2 1959
Product: Gasoline,REGULAR,8
Remove Date: Jan 1 1979
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

29
NE
1/8-1/4
0.240 mi.
1265 ft.

GREAT LAKES HOME HEALTH
900 COOPER ST
JACKSON, MI 49201

SHWS S108632549
N/A

Relative:
Higher

SHWS:

Facility ID: 38000394
Source: Not reported
SAM Score: 33 out of 48
SAM Score Date: 03/09/2007
Township: 02S
Range: 01W
Section: 35
Quarter: Not reported
Quarter/Quarter: Not reported
Facility Status: Inactive - no actions taken to address contamination
Pollutant(s): Not reported

Actual:
945 ft.

30
SSW
1/8-1/4
0.246 mi.
1300 ft.

J & J INDUSTRIES INC
414 N JACKSON ST
JACKSON, MI 49201

FINDS 1004724615
RCRA-NonGen MIR000008631

Relative:
Higher

FINDS:

Other Pertinent Environmental Activity Identified at Site

Actual:
928 ft.

Registry ID: 110003691924

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency: 12/18/2007
Facility name: J & J INDUSTRIES INC
Facility address: 414 N JACKSON ST

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

J & J INDUSTRIES INC (Continued)

1004724615

JACKSON, MI 49201
EPA ID: MIR000008631
Contact: JAMES MAES
Contact address: 414 N JACKSON ST
JACKSON, MI 49201
Contact country: Not reported
Contact telephone: (517) 784-3586
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: JAMES R MAES
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/22/1997
Owner/Op end date: Not reported

Owner/operator name: JAMES R MAES
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/22/1997
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

J & J INDUSTRIES INC (Continued)

1004724615

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 10/05/1995
Facility name: J & J INDUSTRIES INC
Classification: Not a generator, verified

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 03/09/2001
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

31
SW
1/4-1/2
0.260 mi.
1375 ft.

AIRPORT LIMOUSINE SERVICE INC
240 W TRAIL ST
JACKSON, MI 49201

LUST **U000255980**
UST **N/A**

Relative:
Higher

LUST:

Actual:
938 ft.

Facility ID: 00001817
Source: STATE OF MICHIGAN
Owner Name: Airport Limousine
Owner Address: 240 W Trail St
Owner City,St,Zip: Jackson, MI 49201-1234
Owner Contact: Not reported
Owner Phone: (517) 784-7412
Country: USA
District: Jackson District Office
Site Name: Airport Limousine Service
Latitude: 42.2523880000
Longitude: -84.4111170000
Date of Collection: 01-11-2001

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AIRPORT LIMOUSINE SERVICE INC (Continued)

U000255980

Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-1298-90
Release Date: Jul 19 1990
Substance Released: Not reported
Release Status: Open
Release Closed Date: Not reported

UST:

Facility ID: 00001817
Facility Type: CLOSED
Latitude: 42.2523880000
Longitude: -84.4111170000
Owner Name: Airport Limousine
Owner Address: 240 W Trail St
Owner City,St,Zip: Jackson, MI 49201-1234
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 784-7412
Contact: JAMES JENSEN
Contact Phone: (517) 784-7412
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 1500
Install Date: Apr 8 1961
Product: Gasoline
Remove Date: May 23 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 2000
Install Date: Apr 8 1961
Product: Gasoline
Remove Date: May 23 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AIRPORT LIMOUSINE SERVICE INC (Continued)

U000255980

Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

G32
SSW
1/4-1/2
0.289 mi.
1528 ft.

HOWARDS RADIATOR
N. JACKSON STREET
JACKSON, MI

BROWNFIELDS **S108417100**
N/A

Site 1 of 2 in cluster G

Relative:
Equal

BROWNFIELD:

Facility ID: Not reported
Region: 1

Actual:
927 ft.

Status: Closed
Property Use: Not reported
BEA: No
Ernie Id Number: 38000044
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Not reported

G33
SSW
1/4-1/2
0.311 mi.
1642 ft.

HOWARDS RADIATOR SERVICE
401 N JACKSON ST
JACKSON, MI 49201

SHWS **S103595010**
N/A

Site 2 of 2 in cluster G

Relative:
Higher

SHWS:

Facility ID: 38000044
Source: Not reported
SAM Score: 29 out of 48
SAM Score Date: 05/26/2004
Township: 02S
Range: 01W
Section: 34
Quarter: SE
Quarter/Quarter: SE

Actual:
928 ft.

Facility Status: Inactive - no actions taken to address contamination
Pollutant(s): Benzene; Cu; Pb; Toluene; Antifreeze

34
SSW
1/4-1/2
0.321 mi.
1694 ft.

232 VAN BUREN
JACKSON CITY, MI 49201

BEA **S107596639**
N/A

Relative:
Higher

BEA:

Secondary Address: Not reported
BEA Number: 688
District: Jackson
Date Received: 1/5/2006 12:59:00 AM
Submitter Name: City of Jackson MI
Petition Determination: No Request
Petition Disclosure: 0

Actual:
929 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S107596639

Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: aronoffl
Division Assigned: Environmental Response Division

H35
NNW
1/4-1/2
0.325 mi.
1718 ft.
COMMERCIAL EXCHANGE
150 W NORTH ST
JACKSON, MI 49202
Site 1 of 2 in cluster H

LUST
UST
U000255895
N/A

Relative:
Lower

LUST:

Facility ID: 00016496
Source: STATE OF MICHIGAN
Owner Name: Commercial Exchange
Owner Address: 2301 E MICHIGAN AVE
Owner City,St,Zip: JACKSON, MI 49202
Owner Contact: Not reported
Owner Phone: (517) 782-9305
Country: USA
District: Jackson District Office
Site Name: Commerical Exchange
Latitude: 42.2590640000
Longitude: -84.4070100000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-1157-92
Release Date: Jul 13 1992
Substance Released: Gasoline
Release Status: Closed
Release Closed Date: May 22 2001

UST:

Facility ID: 00016496
Facility Type: CLOSED
Latitude: 42.2590640000
Longitude: -84.4070100000
Owner Name: Commercial Exchange
Owner Address: 2301 E MICHIGAN AVE
Owner City,St,Zip: JACKSON, MI 49202
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 782-9305
Contact: BARNEY CHAPMAN
Contact Phone: (517) 764-2300
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMMERCIAL EXCHANGE (Continued)

U000255895

Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 500
Install Date: Apr 22 1982
Product: Gasoline
Remove Date: Jul 13 1992
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Bare Steel
Piping Type: Suction: Valve at Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

H36
NNW
1/4-1/2
0.329 mi.
1736 ft.

AIRMASTER FAN COMPANY
150 W. NORTH STREET
JACKSON CITY, MI 49204

Site 2 of 2 in cluster H

AUL S109416492
N/A

Relative:
Lower

AUL:

Actual:
921 ft.

Facility Addr2: Not reported
Status: Filed
Site Name: Not reported
Property: 150 W. North Street, Jackson
Land Use Restriction Type: RC
Program Type: Part 213
Program Support Assigned User: Not reported
Program Support Assigned Date: Not reported
Legal Description Of Property: Not reported
District: Not reported
Based On The Deq Ref #: 11121308175
MDEQ Reference Number: RC-RRD-213-08-175
Sid Id: Not reported
Property Or Description Restricted Area: Not reported
Lead Division: RRD
File Name Of Hyperlinked Legal Doc: U:\KERMIT\11121308175.PDF
Mapped Polygon S Area In Acres: Not reported
Mapped Polygon S Area In Square Miles: Not reported
Date Data Entry Started: Not reported
Date Data Entry Finished: Not reported
Individual Or Staff Assoc With The Mapping: Not reported
Program Used To Map Restricted Features: Not reported
Map Comments: LUR is NOT mapped in KERMIT as of 20090407 - Nick Ekel
Comment: 10/27/2008, received copy recorded in 2001 without DEQ reference numbers from the district. 10/28/08, Linda Fowler assigned a 2008 DEQ reference number for this 2001 RC.
Date Legal Paperwork Stamped/Filed/Register Of Deeds: 5/7/2001 00:00:00
Commercial I Land Use Restriction: 0
Commercial Ii Land Use Restriction: 0
Commercial Iii Land Use Restriction: 0
Commercial Iv Land Use Restriction: 0
Industrial Land Use Restriction: 0
Residential Land Use Restriction: 0
Recreational Land Use Restriction: 0
Multiple Land-Use Restrictions: 0
Site Specific Restrictions: 0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AIRMASTER FAN COMPANY (Continued)

S109416492

Groundwater Consumption Restrictions: 1
Groundwater Contact Restrictions: 0
Special Well Construction Requirements: 0
Special Building Restrictions: 0
Excavation And Soil Movement Restrictions: 0
Soil Movement Requirements: 1
There Is A Restriction On All Construction: 0
Monitoring Well Protected, No Tampering Or Removal: 0
There Is An Exposure Barrier In Place: 0
There Is A Health And Safety Plan: 0
There Is A Permanent Marker On The Site: 0

37
SSE
1/4-1/2
0.351 mi.
1852 ft.

WILLIAM NAVARRE
317 OAK ST
JACKSON, MI 49201

LUST S100074364
N/A

Relative:
Equal

LUST:

Actual:
927 ft.

Facility ID: 50000227
Source: STATE OF MICHIGAN
Owner Name: Nrt Owner
Owner Address: Unknown
Owner City,St,Zip: Unknown, MI 99999
Owner Contact: Not reported
Owner Phone: Not reported
Country: USA
District: Jackson District Office
Site Name: West And West Sign Studio
Latitude: 42.2496040000
Longitude: -84.4046860000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-2395-90
Release Date: Nov 16 1990
Substance Released: Not reported
Release Status: Open
Release Closed Date: Not reported

38
South
1/4-1/2
0.376 mi.
1983 ft.

JACKSON GASLIGHT CO
W. CLINTON STREET
JACKSON, MI 49201

Manufactured Gas Plants 1008408124
N/A

Relative:
Higher

Manufactured Gas Plants:
Alternate Name: JACKSON GAS CO.

Actual:
929 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

39
SW
1/4-1/2
0.381 mi.
2012 ft.

405 N BLACKSTONE
JACKSON CITY, MI

BEA S105767696
N/A

Relative:
Higher

BEA:

Secondary Address: NE corner of N Blackstone & VanBuren
BEA Number: 285
District: Jackson
Date Received: 3/30/2001 12:59:00 AM
Submitter Name: Phyleo Realty Company
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: lipinski
Division Assigned: Environmental Response Division

Actual:
951 ft.

Secondary Address: NE corner of N Blackstone & VanBuren
BEA Number: 256
District: Jackson
Date Received: 9/25/2000
Submitter Name: City of Jackson
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: tempm
Division Assigned: Environmental Response Division

40
West
1/4-1/2
0.392 mi.
2071 ft.

KAR KLINIC
401 W GANSON ST
JACKSON, MI 49201

LUST U002301586
UST N/A

Relative:
Higher

LUST:

Facility ID: 00015388
Source: STATE OF MICHIGAN
Owner Name: Zimmerman Fuel
Owner Address: 2200 Enterprise St
Owner City,St,Zip: Jackson, MI 49203-3466
Owner Contact: Not reported
Owner Phone: (517) 782-8259
Country: USA
District: Jackson District Office
Site Name: Environmental 76 Station
Latitude: 42.2544860000
Longitude: -84.4145350000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Actual:
988 ft.

Leak Number: C-0665-94
Release Date: Jun 28 1994

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KAR KLINIC (Continued)

U002301586

Substance Released: Gasoline,Diesel,Used Oil
Release Status: Closed
Release Closed Date: Feb 7 1996

UST:

Facility ID: 00015388
Facility Type: CLOSED
Latitude: 42.2544860000
Longitude: -84.4145350000
Owner Name: Zimmerman Fuel
Owner Address: 2200 Enterprise St
Owner City,St,Zip: Jackson, MI 49203-3466
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 782-8259
Contact: RICHARD FEISTER
Contact Phone: (517) 782-8259
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 4000
Install Date: Apr 15 1976
Product: Gasoline
Remove Date: Jun 16 1995
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: **Removed from Ground**
Capacity: 2000
Install Date: Apr 15 1976
Product: Gasoline
Remove Date: Jun 16 1995
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
Tank Status: **Removed from Ground**
Capacity: 550
Install Date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KAR KLINIC (Continued)

U002301586

Product: Used Oil
Remove Date: Jun 16 1995
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Bare Steel
Piping Type: Gravity Fed?
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Apr 15 1976
Product: Diesel
Remove Date: Jun 16 1995
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

I41
SSW
1/4-1/2
0.396 mi.
2093 ft.

226 W LOUIS GLICK HWY
JACKSON CITY, MI 49201
Site 1 of 2 in cluster I

BEA S106425599
N/A

Relative:
Higher

BEA:
Secondary Address: Not reported
BEA Number: 532
District: Jackson
Date Received: 5/28/2004 12:59:00 AM
Submitter Name: City of Jackson
Petition Determination: Pending
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: englishc
Division Assigned: Environmental Response Division

Actual:
944 ft.

I42
SSW
1/4-1/2
0.399 mi.
2106 ft.

232 W LOUIS GLICK HWY
JACKSON CITY, MI 49201
Site 2 of 2 in cluster I

BEA S105767697
N/A

Relative:
Higher

BEA:
Secondary Address: SE corner of N Blackstone & VanBuren
BEA Number: 284
District: Jackson
Date Received: 3/30/2001 12:59:00 AM
Submitter Name: Phyleo Realty Company
Petition Determination: Affirmed
Petition Disclosure: 1

Actual:
945 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S105767697

Category: Same Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: lipinski
Division Assigned: Environmental Response Division

Secondary Address: SE corner of N Blackstone and VanBuren
BEA Number: 257
District: Jackson
Date Received: 9/25/2000
Submitter Name: City of Jackson
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: temppm
Division Assigned: Environmental Response Division

43
SSW
1/4-1/2
0.413 mi.
2181 ft.

GOODYEAR TIRE CENTER #5131
224 N JACKSON ST
JACKSON, MI 49201

LUST U003083045
UST N/A

Relative:
Higher

LUST:
Facility ID: 00038821
Source: STATE OF MICHIGAN
Owner Name: Goodyear Tire & Rubber Co
Owner Address: 1144 E Market St Dept 824
Owner City,St,Zip: Akron, OH 44305
Owner Contact: Not reported
Owner Phone: (330) 796-9434
Country: USA
District: Jackson District Office
Site Name: Goodyear Tire Center #5131
Latitude: 42.2486850000
Longitude: -84.4091720000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Actual:
937 ft.

Leak Number: C-1168-95
Release Date: Oct 31 1995
Substance Released: Used Oil
Release Status: Closed
Release Closed Date: Jan 24 1996

UST:
Facility ID: 00038821
Facility Type: CLOSED
Latitude: 42.2486850000
Longitude: -84.4091720000
Owner Name: Goodyear Tire & Rubber Co
Owner Address: 1144 E Market St Dept 824
Owner City,St,Zip: Akron, OH 44305

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GOODYEAR TIRE CENTER #5131 (Continued)

U003083045

Owner Country: USA
Owner Contact: Not reported
Owner Phone: (330) 796-9434
Contact: MR JOE SMERGLIA
Contact Phone: (216) 796-7898
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 550
Install Date: Not reported
Product: Used Oil
Remove Date: Oct 31 1995
Tank Release Detection: Not reported
Pipe Release Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

44
South
1/4-1/2
0.420 mi.
2219 ft.

KRESGE BUILDING
133-135 W. MICHIGAN AVENUE & 132-134 W. CORTLAND
JACKSON, MI 49201

US BROWNFIELDS 1009310277
N/A

Relative:
Higher

US BROWNFIELDS:
Recipient name: Jackson, City of
Project name: Jackson, MI (A04)
Property name: Kresge Building
Parcel #: 4-002200000 and 4-002400000
Parcel size: 0.33
Latitude: 42.24832
Longitude: -84.40723
Region: 5
HCM label: Address Matching-House Number
Map scale: 1:24,000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 15959
Start date: 1/10/2005
Completed date: 1/10/2005
Accomplishment type: Phase I Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Private
Current use: vacant
Current owner: RPM Holdings, LLC
Future use: Not reported
Past use flag: Not reported
Future use flag: Not reported
Cleanup required: No

Actual:
931 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KRESGE BUILDING (Continued)

1009310277

Proprietary controls:	Not reported
Gov. control:	Not reported
Enforcement permit tools:	Not reported
Info. devices:	Not reported
Video available:	No
Photo available:	Yes
Usage type:	Not reported
Not in state/tribal program:	Not reported
IC data address:	Not reported
IC in place date:	Not reported
IC in place flag:	Unknown
IC required flag:	Unknown
NFA issue date:	Not reported
State and tribal program date:	Not reported
State and tribal program ID:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Yes
Asbestos cleaned:	Yes
Controlled substance found:	Not reported
Controlled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
None found:	Not reported
None cleaned up:	Not reported
No media found:	Not reported
No media cleaned up:	Not reported
Other found:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water affected:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
Unknown cleaned:	Yes
Unknown media:	Not reported
Unknown media cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Recipient name:	Jackson, City of
Project name:	Jackson, MI (A04)
Property name:	Kresge Building

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KRESGE BUILDING (Continued)

1009310277

Parcel #: 4-002200000 and 4-002400000
Parcel size: 0.33
Latitude: 42.24832
Longitude: -84.40723
Region: 5
HCM label: Address Matching-House Number
Map scale: 1:24,000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 15959
Start date: 9/2/2005
Completed date: 9/2/2005
Accomplishment type: Phase II Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Private
Current use: vacant
Current owner: RPM Holdings, LLC
Future use: Not reported
Past use flag: Not reported
Future use flag: Not reported
Cleanup required: No
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: No
Photo available: Yes
Usage type: Not reported
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Unknown
IC required flag: Unknown
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Yes
Asbestos cleaned: Yes
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Not reported
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
PAHs found: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KRESGE BUILDING (Continued)

1009310277

PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Not reported
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Not reported
Soil cleaned up: Not reported
Surface water affected: Not reported
Surface water cleaned: Not reported
Unknown found: Not reported
Unknown cleaned: Yes
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported

Property Description: A Phase I ESA indicates that the buildings have been used for commercial activities since at least 1886. Occupants of the north building (W. Michigan Avenue) included a dry cleaner for a short time (circa 1907) and the S.S. Kresge Company. The south building (W. Cortland Street) was used as a paint shop and furniture refinisher for a short time (circa 1930), and as a hotel and offices. The historic use of the subject property by a dry cleaning and furniture refinisher were identified as a Recognized Environmental Condition in the Phase I ESA.

45
SSW
1/4-1/2
0.447 mi.
2358 ft.

PEARL STREET GARAGE
250 W PEARL ST
JACKSON, MI 49201

LUST **U000255988**
UST **N/A**
BEA

Relative:
Higher

LUST:
Facility ID: 00017314
Source: STATE OF MICHIGAN
Owner Name: Consumers Energy Co
Owner Address: 1945 W Parnall Rd P-24-501A
Owner City,St,Zip: Jackson, MI 49201
Owner Contact: Robert Newman
Owner Phone: (517) 788-0350
Country: USA
District: Jackson District Office
Site Name: Pearl Street Garage
Latitude: 42.2485130000
Longitude: -84.4108840000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Actual:
948 ft.

Leak Number: C-0082-04
Release Date: Oct 2 2003
Substance Released: Gasoline
Release Status: Closed

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PEARL STREET GARAGE (Continued)

U000255988

Release Closed Date: Feb 20 2004

Leak Number: C-0208-03
Release Date: May 21 2003
Substance Released: Gasoline
Release Status: Closed
Release Closed Date: Feb 20 2004

UST:

Facility ID: 00017314
Facility Type: CLOSED
Latitude: 42.2485130000
Longitude: -84.4108840000
Owner Name: Consumers Energy Co
Owner Address: 1945 W Parnall Rd P-24-501A
Owner City,St,Zip: Jackson, MI 49201
Owner Country: USA
Owner Contact: Robert Newman
Owner Phone: (517) 788-0350
Contact: Doug Crips
Contact Phone: (517) 788-7148
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 10000
Install Date: May 7 1979
Product: Gasoline
Remove Date: May 19 2003
Tank Release Detection: Automatic Tank Gauging, Inventory Control, Tank Tightness Testing, Vapor Monitoring
Pipe Release Detection: Automatic Line Leak Detectors, Interstitial Monitoring Double Walled Piping, Line Tightness Testing, Vapor Monitoring
Piping Material: Double Walled, Fiberglass reinforced plastic
Piping Type: Suction: Valve at Tank
Constr Material: Cathodically Protected Steel
Impressed Device: No

BEA:

Secondary Address: Not reported
BEA Number: 533
District: Jackson
Date Received: 5/28/2004 12:59:00 AM
Submitter Name: City of Jackson
Petition Determination: Pending
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: englishc
Division Assigned: Storage Tank Division

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

46
SE
1/4-1/2
0.458 mi.
2419 ft.

MILLER'S AUTOMOTIVE
500 E PEARL ST
JACKSON, MI 49201

LUST **U002301591**
UST **N/A**

Relative:
Higher

LUST:

Facility ID: 00003514
Source: STATE OF MICHIGAN
Owner Name: Tom Miler
Owner Address: 500 E Pearl St
Owner City,St,Zip: Jackson, MI 49201-1528
Owner Contact: Not reported
Owner Phone: (517) 782-0300
Country: USA
District: Jackson District Office
Site Name: Miller's Automotive
Latitude: 42.2492520000
Longitude: -84.4009990000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-0494-98
Release Date: Jun 15 1998
Substance Released: Unknown
Release Status: Open
Release Closed Date: Not reported

UST:

Facility ID: 00003514
Facility Type: CLOSED
Latitude: 42.2492520000
Longitude: -84.4009990000
Owner Name: Tom Miler
Owner Address: 500 E Pearl St
Owner City,St,Zip: Jackson, MI 49201-1528
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 782-0300
Contact: TOM MILLER
Contact Phone: (517) 782-0300
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Removed from Ground**
Capacity: 1000
Install Date: May 6 1955
Product: Used Oil

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MILLER'S AUTOMOTIVE (Continued)

U002301591

Remove Date: Jun 15 1998
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Pressure
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 530
Install Date: May 6 1955
Product: Used Oil
Remove Date: Jun 15 1998
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Pressure
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 530
Install Date: May 6 1955
Product: Used Oil
Remove Date: Jun 15 1998
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Pressure
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
Tank Status: Removed from Ground
Capacity: 530
Install Date: May 6 1955
Product: Used Oil
Remove Date: Jun 15 1998
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Pressure
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

J47
South
1/4-1/2
0.476 mi.
2513 ft.

BUTTERFIELD DEVELOPMENT
110 W. MICHIGAN AVENUE
JACKSON, MI 49201

DEL SHWS **S105965906**
N/A

Site 1 of 2 in cluster J

Relative:
Higher

DELETED HWS:
Facility ID: 38000268
Status: Delisted - no longer meets criteria specified in rules

Actual:
932 ft.

J48
South
1/4-1/2
0.477 mi.
2519 ft.

100 W MICHIGAN
GRASS LAKE VILLAGE, MI 49201

BEA **S107596627**
N/A

Site 2 of 2 in cluster J

Relative:
Higher

BEA:
Secondary Address: Not reported
BEA Number: 700
District: Jackson
Date Received: 2/21/2006 12:59:00 AM
Submitter Name: Centennial Building LLC
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: englishc
Division Assigned: Storage Tank Division

Actual:
932 ft.

49
South
1/4-1/2
0.481 mi.
2538 ft.

WOOLWORTH BUILDING
165 WEST MICHIGAN
JACKSON, MI 49201

US BROWNFIELDS **1009828888**
N/A

Relative:
Higher

US BROWNFIELDS:
Recipient name: Jackson County
Project name: Jackson County, MI (A04)
Property name: Woolworth Building
Parcel #: 4-00200000
Parcel size: 1.00
Latitude: 42.145
Longitude: -84.243
Region: 5
HCM label: Thematic Mapper
Map scale: 1:24000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 28203
Start date: 4/21/2006
Completed date: 4/21/2006
Accomplishment type: Phase I Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Government
Current use: Not reported
Current owner: Jackson County
Future use: Not reported
Past use flag: Not reported

Actual:
940 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WOOLWORTH BUILDING (Continued)

1009828888

Future use flag: Yes
Cleanup required: Unknown
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: No
Photo available: Yes
Usage type: Greenspace
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Unknown
IC required flag: Not reported
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Yes
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Not reported
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Not reported
Other metals cleaned: Not reported
PAHs found: Not reported
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Not reported
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Not reported
Soil cleaned up: Not reported
Surface water affected: Not reported
Surface water cleaned: Not reported
Unknown found: Not reported
Unknwon cleaned: Not reported
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported

Recipient name: Jackson County

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WOOLWORTH BUILDING (Continued)

1009828888

Project name: Jackson County, MI (A04)
Property name: Woolworth Building
Parcel #: 4-00200000
Parcel size: 1.00
Latitude: 42.145
Longitude: -84.243
Region: 5
HCM label: Thematic Mapper
Map scale: 1:24000
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 28203
Start date: 7/14/2006
Completed date: 7/14/2006
Accomplishment type: Phase III Environmental Assessment
Accomplishment (acres): Not reported
Ownership entity: Government
Current use: Not reported
Current owner: Jackson County
Future use: Not reported
Past use flag: Not reported
Future use flag: Yes
Cleanup required: Unknown
Proprietary controls: Not reported
Gov. control: Not reported
Enforcement permit tools: Not reported
Info. devices: Not reported
Video available: No
Photo available: Yes
Usage type: Greenspace
Not in state/tribal program: Not reported
IC data address: Not reported
IC in place date: Not reported
IC in place flag: Unknown
IC required flag: Not reported
NFA issue date: Not reported
State and tribal program date: Not reported
State and tribal program ID: Not reported
Air contaminated: Not reported
Air cleaned: Not reported
Asbestos found: Yes
Asbestos cleaned: Not reported
Controlled substance found: Not reported
Controlled substance cleaned: Not reported
Drinking water affected: Not reported
Drinking water cleaned: Not reported
Groundwater affected: Not reported
Groundwater cleaned: Not reported
Lead contaminant found: Not reported
Lead cleaned up: Not reported
None found: Not reported
None cleaned up: Not reported
No media found: Not reported
No media cleaned up: Not reported
Other found: Not reported
Other cleaned up: Not reported
Other metals found: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WOOLWORTH BUILDING (Continued)

1009828888

Other metals cleaned: Not reported
PAHs found: Not reported
PAHs cleaned up: Not reported
PCBs found: Not reported
PCBs cleaned up: Not reported
Petro products found: Not reported
Petro products cleaned: Not reported
Sediments found: Not reported
Sediments cleaned: Not reported
Soil affected: Not reported
Soil cleaned up: Not reported
Surface water affected: Not reported
Surface water cleaned: Not reported
Unknown found: Not reported
Unknown cleaned: Not reported
Unknown media: Not reported
Unknown media cleaned: Not reported
VOCs found: Not reported
VOCs cleaned: Not reported

Property Description: The property was first developed in the mid-1800s as part of downtown Jackson. The property has been a variety of commercial uses and most recently a County office building for Friend of the Court.

50
SSW
1/4-1/2
0.488 mi.
2575 ft.

209 N BLACKSTONE
JACKSON CITY, MI 49201

BEA S107596638
N/A

Relative:
Higher

BEA:

Secondary Address: Not reported
BEA Number: 689
District: Jackson
Date Received: 1/5/2006 12:59:00 AM
Submitter Name: City of Jackson MI
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: aronoffl
Division Assigned: Environmental Response Division

Actual:
962 ft.

51
SSE
1/4-1/2
0.499 mi.
2636 ft.

409 EAST LOUIS GLICK HIGHWAY
JACKSON CITY, MI

BEA S105767658
N/A

Relative:
Higher

BEA:

Secondary Address: Not reported
BEA Number: 237
District: Jackson
Date Received: 6/5/2000
Submitter Name: City of Jackson
Petition Determination: Affirmed
Petition Disclosure: 1

Actual:
930 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S105767658

Category: No Hazardous Substance(s)
Determination 20107A: Pending
Reviewer: temppm
Division Assigned: Environmental Response Division

52
SSE
1/2-1
0.631 mi.
3333 ft.

CONSUMERS ENERGY HDQS PROJ ACT 381
FRANCIS ST.
JACKSON, MI 49201

SHWS S108632535
N/A

Relative:
Higher

SHWS:

Facility ID: 38000346
Source: Not reported
SAM Score: 34 out of 48
SAM Score Date: 03/06/2007
Township: 03S
Range: 01W
Section: 02

Actual:
934 ft.

Quarter: Not reported
Quarter/Quarter: Not reported

Facility Status: Interim Response conducted - No further activities anticipated

Pollutant(s): Not reported

53
NNE
1/2-1
0.643 mi.
3395 ft.

GEORGE'S SERVICE CENTER
1135 COOPER
JACKSON, MI 49202

SHWS S105144154
DEL SHWS N/A

Relative:
Higher

SHWS:

Facility ID: 38000287
Source: Gasoline Service Station
SAM Score: 23 out of 48
SAM Score Date: 08/24/1994
Township: 02s
Range: 01w
Section: 26
Quarter: SW
Quarter/Quarter: SW

Actual:
945 ft.

Facility Status: Deleted - available documentation does not support listing

Pollutant(s): Diesel fuel

DELETED HWS:

Facility ID: 38000287
Status: Deleted - available documentation does not support listing

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

54
North
1/2-1
0.670 mi.
3537 ft.

MOTOR STATE OIL & GREASE
155 HOBART
JACKSON, MI

SHWS **S105144157**
N/A

Relative:
Higher

SHWS:

Facility ID: 38000316
Source: Petroleum Products
SAM Score: 32 out of 48
SAM Score Date: 04/28/2004
Township: 2S
Range: 1W
Section: 27
Quarter: SE
Quarter/Quarter: SE

Actual:
935 ft.

Facility Status: Interim Response in progress
Pollutant(s): Phenanthrene

55
North
1/2-1
0.734 mi.
3878 ft.

145 W MONROE
145 W MONROE
JACKSON, MI 49202

SHWS **S108632550**
N/A

Relative:
Higher

SHWS:

Facility ID: 38000395
Source: Not reported
SAM Score: 21 out of 48
SAM Score Date: 03/29/2007
Township: 02S
Range: 01W
Section: 27
Quarter: Not reported
Quarter/Quarter: Not reported
Facility Status: No status assigned
Pollutant(s): Not reported

Actual:
939 ft.

56
NNW
1/2-1
0.755 mi.
3987 ft.

SAM'S IRON & METAL
212 WEST MONROE
JACKSON, MI 49202

SHWS **1001966540**
N/A

Relative:
Lower

SHWS:

Facility ID: 38000180
Source: Scrap & Waste Materials
SAM Score: 20 out of 48
SAM Score Date: 06/01/2004
Township: 02S
Range: 01W
Section: 27
Quarter: SE
Quarter/Quarter: NW

Actual:
920 ft.

Facility Status: Interim Response in progress
Pollutant(s): Metals

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

57
SSE
1/2-1
0.800 mi.
4223 ft.

JACKSON GAS CO
703 AIRLINE DRIVE
JACKSON, MI 49201

Manufactured Gas Plants

1008408123
N/A

Relative:
Higher

Manufactured Gas Plants:

Alternate Name: JACKSON NATIONAL GASLIGHT AND FUEL CO; CONSUMERS POWER.

Actual:
936 ft.

58
SE
1/2-1
0.858 mi.
4533 ft.

EATON AEROQUIP
300 S EAST AVE
JACKSON, MI 49203

FINDS
RCRA-LQG
UST
RAATS
CORRACTS

1000340230
MID005356498

Relative:
Higher

FINDS:

Other Pertinent Environmental Activity Identified at Site

Actual:
938 ft.

Registry ID: 110000409807

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-LQG:

Date form received by agency: 02/15/2008

Facility name: EATON AEROQUIP

Facility address: 300 S EAST AVE
JACKSON, MI 49203

EPA ID: MID005356498

Contact: RANDY GAMBLE

Contact address: 300 S EAST AVE
JACKSON, MI 49203

Contact country: Not reported

Contact telephone: (517) 789-2633

Contact email: Not reported

EPA Region: 05

Land type: Private

Classification: Large Quantity Generator

Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name: EATON AEROQUIP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/31/2001
Owner/Op end date: Not reported

Owner/operator name: EATON AEROQUIP CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/27/1997
Owner/Op end date: Not reported

Owner/operator name: EATON AEROQUIP & VICKERS INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 11/18/1980
Owner/Op end date: Not reported

Owner/operator name: EATON AEROQUIP & VICKERS INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 11/18/1980
Owner/Op end date: Not reported

Owner/operator name: EATON AEROQUIP CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/27/1997

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Owner/Op end date: Not reported

Owner/operator name: EATON AEROQUIP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/31/2001
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 02/07/2007
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 05/08/2006
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 03/01/2006
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 04/29/2004
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 03/01/2004
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 03/01/2002
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 02/23/2002
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 03/02/2000
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 03/01/2000
Facility name: EATON AEROQUIP
Site name: AEROQUIP CORP HOSE PRODUCTS DIV
Classification: Large Quantity Generator

Date form received by agency: 02/29/1996
Facility name: EATON AEROQUIP
Site name: AEROQUIP CORP/AEROSPACE, HOSE DIV.
Classification: Large Quantity Generator

Date form received by agency: 09/14/1995
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 02/22/1994
Facility name: EATON AEROQUIP
Site name: AEROQUIP CORP - AEROSPACE GROUP HOSE DIV
Classification: Large Quantity Generator

Date form received by agency: 02/25/1992
Facility name: EATON AEROQUIP

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Site name: AEROQUIP CORP JACKSON PLT
Classification: Large Quantity Generator

Date form received by agency: 02/14/1990
Facility name: EATON AEROQUIP
Site name: AEROQUIP CORP JACKSON PLT
Classification: Large Quantity Generator

Date form received by agency: 11/18/1980
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Date form received by agency: 11/12/1980
Facility name: EATON AEROQUIP
Classification: Large Quantity Generator

Biennial Reports:

Last Biennial Reporting Year: 2007

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Amount (Lbs): 7690.2

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 1600

Waste code: D008
Waste name: LEAD
Amount (Lbs): 1683

Waste code: D026
Waste name: CRESOL
Amount (Lbs): 1683

Waste code: D035
Waste name: METHYL ETHYL KETONE
Amount (Lbs): 1683

Waste code: D039
Waste name: TETRACHLOROETHYLENE
Amount (Lbs): 10499.9

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Amount (Lbs): 1683

Waste code: F005

Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Amount (Lbs): 1683

Corrective Action Summary:

Event date: 07/29/1991
Event: RFA Completed

Event date: 07/29/1991
Event: RFA Determination Of Need For An RFI, RFI is Necessary;

Event date: 12/31/1991
Event: CA Prioritization, Facility or area was assigned a medium corrective action priority.

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/12/1995
Date achieved compliance: 10/17/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/12/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 09/12/1995
Date achieved compliance: 10/17/1995
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/12/1995
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/07/1990
Date achieved compliance: 12/21/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/18/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/12/1988
Date achieved compliance: 12/07/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/26/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/05/1984
Date achieved compliance: 01/15/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/26/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 07/23/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 09/11/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 10/17/1995
Evaluation lead agency: State

Evaluation date: 09/11/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Area of violation: Generators - General
Date achieved compliance: 10/17/1995
Evaluation lead agency: State

Evaluation date: 06/08/1993
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/07/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/21/1990
Evaluation lead agency: State

Evaluation date: 09/12/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/07/1988
Evaluation lead agency: State

Evaluation date: 10/28/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 10/11/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/05/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/15/1985
Evaluation lead agency: State

UST:

Facility ID: 00001146
Facility Type: CLOSED
Latitude: 42.2473370000
Longitude: -84.3929380000
Owner Name: Aeroquip Corp
Owner Address: 300 S East Ave
Owner City,St,Zip: Jackson, MI 49203-1973
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 787-8121
Contact: JAMES M. SHEIL
Contact Phone: (517) 787-8121
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 3000
Install Date: Jan 28 1957
Product: Hazardous Substance
Remove Date: Oct 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: 2
Tank Status: Closed in Ground
Capacity: 1000
Install Date: Jan 28 1957
Product: LUBE OIL
Remove Date: Feb 1 1985
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: 3
Tank Status: Closed in Ground
Capacity: 1000
Install Date: Jan 28 1957
Product: LUBE OIL
Remove Date: Feb 1 1985
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: 4
Tank Status: Closed in Ground
Capacity: 1000
Install Date: Jan 28 1957
Product: Hazardous Substance
Remove Date: Oct 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Impressed Device: No

Tank ID: 5

Tank Status: **Closed in Ground**

Capacity: 1000

Install Date: Jan 28 1957

Product: Hazardous Substance

Remove Date: Oct 1 1987

Tank Release Detection: Not reported

Pipe Release Detection: Not reported

Piping Material: Bare Steel

Piping Type: Not reported

Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel

Impressed Device: No

Tank ID: 6

Tank Status: **Closed in Ground**

Capacity: 1000

Install Date: Jan 28 1957

Product: LUBE OIL

Remove Date: Feb 1 1985

Tank Release Detection: Not reported

Pipe Release Detection: Not reported

Piping Material: Bare Steel

Piping Type: Not reported

Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel

Impressed Device: No

Tank ID: 7

Tank Status: **Closed in Ground**

Capacity: 1000

Install Date: Jan 28 1957

Product: LUBE OIL

Remove Date: Feb 1 1985

Tank Release Detection: Not reported

Pipe Release Detection: Not reported

Piping Material: Bare Steel

Piping Type: Not reported

Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel

Impressed Device: No

Tank ID: 8

Tank Status: **Closed in Ground**

Capacity: 6000

Install Date: Jan 28 1957

Product: TRANSULTEX

Remove Date: Oct 1 1987

Tank Release Detection: Not reported

Pipe Release Detection: Not reported

Piping Material: Galvanized Steel

Piping Type: Not reported

Constr Material: Asphalt Coated or Bare Steel

Impressed Device: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Tank ID: 9
Tank Status: **Closed in Ground**
Capacity: 6000
Install Date: Jan 28 1957
Product: CLEARTEX
Remove Date: Oct 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 10
Tank Status: **Removed from Ground**
Capacity: 10000
Install Date: Jan 28 1977
Product: Heating Oil
Remove Date: Dec 1 1986
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 11
Tank Status: **Removed from Ground**
Capacity: 500
Install Date: Jan 29 1972
Product: Gasoline
Remove Date: Dec 1 1986
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

CORRACTS:

EPA ID: MID005356498
EPA Region: 5
Area Name: ENTIRE FACILITY
Actual Date: 7/29/1991
Action: CA050 - RFA Completed
NAICS Code(s): 332912
Fluid Power Valve and Hose Fitting Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: MID005356498
EPA Region: 5
Area Name: ENTIRE FACILITY

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

EATON AEROQUIP (Continued)

1000340230

Actual Date: 7/29/1991
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): 332912
Fluid Power Valve and Hose Fitting Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: MID005356498
EPA Region: 5
Area Name: ENTIRE FACILITY
Actual Date: 12/31/1991
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium
corrective action priority
NAICS Code(s): 332912
Fluid Power Valve and Hose Fitting Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

59
NNW
1/2-1
0.877 mi.
4628 ft.

LIBRA INDUSTRIES INC OF MICHIGAN
1435 N BLACKSTONE ST
JACKSON, MI 49202

SHWS **1000352504**
FINDS **MID061865754**
RCRA-LQG
RAATS
AST
CERC-NFRAP

Relative:
Higher

Actual:
928 ft.

SHWS:
Facility ID: 38000021
Source: Not reported
SAM Score: 21 out of 48
SAM Score Date: 07/01/2005
Township: 02S
Range: 01W
Section: 27
Quarter: SE
Quarter/Quarter: NW
Facility Status: Interim Response in progress
Pollutant(s): PCE; Xylenes

FINDS:

Other Pertinent Environmental Activity Identified at Site

Registry ID: 110000856841

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AFS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

The NEI (National Emissions Inventory) database contains information

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-LQG:

Date form received by agency: 02/12/2008
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Facility address: 1435 N BLACKSTONE ST
JACKSON, MI 49202
EPA ID: MID061865754
Mailing address: PO BOX 1105
JACKSON, MI 49204
Contact: DENNIS ZASKI
Contact address: 1435 N BLACKSTONE ST
JACKSON, MI 49202
Contact country: Not reported
Contact telephone: (517) 787-5675
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name: LIBRA INDUSTRIES INC OF MICHIGAN
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/01/1969
Owner/Op end date: Not reported

Owner/operator name: LIBRA INDUSTRIES INC OF MICHIGAN
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/01/1969
Owner/Op end date: Not reported

Owner/operator name: LIBRA INDUSTRIES INC OF MICHIGAN
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/01/1969
Owner/Op end date: Not reported

Owner/operator name: LIBRA INDUSTRIES INC OF MICHIGAN
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/01/1969
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 03/20/2006
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Date form received by agency: 03/01/2006
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Date form received by agency: 05/06/2005
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Date form received by agency: 03/01/2004
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Date form received by agency: 02/16/2004
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Date form received by agency: 03/01/2002
Facility name: LIBRA INDUSTRIES INC OF MICHIGAN
Classification: Large Quantity Generator

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Date form received by agency: 02/13/2002

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/10/2000

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/08/2000

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 01/27/1998

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/08/1996

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Site name: LIBRA INDUSTRIES, INC. OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 09/20/1995

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/21/1994

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Site name: LIBRA INDUSTRIES, INC. OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/21/1992

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 02/22/1990

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Date form received by agency: 08/22/1980

Facility name: LIBRA INDUSTRIES INC OF MICHIGAN

Classification: Large Quantity Generator

Biennial Reports:

Last Biennial Reporting Year: 2007

Annual Waste Handled:

Waste code: F002

Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Amount (Lbs): 60509.4

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Not reported
Date violation determined: Not reported
Date achieved compliance: Not reported
Violation lead agency: Not reported
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Air Emission Standards - Tank/Sl/Container
Date violation determined: 09/09/2003
Date achieved compliance: 05/01/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/14/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/09/2003
Date achieved compliance: 05/01/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/14/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - Incinerator Standards
Date violation determined: 09/09/2003
Date achieved compliance: 05/01/2004
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/14/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/20/1990
Date achieved compliance: 12/03/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/16/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 02/04/1987
Date achieved compliance: 12/03/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/02/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/04/1986
Date achieved compliance: 01/09/1987
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 07/18/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 5250
Final penalty amount: 5250
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/04/1986
Date achieved compliance: 01/09/1987
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 07/18/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 5250
Final penalty amount: 5250
Paid penalty amount: Not reported

Regulation violated: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Area of violation: Generators - General
Date violation determined: 12/04/1985
Date achieved compliance: 01/09/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/17/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/04/1985
Date achieved compliance: 01/09/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 12/18/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/18/1985
Date achieved compliance: 01/09/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/30/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/14/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/09/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/01/2004
Evaluation lead agency: EPA

Evaluation date: 09/09/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - Incinerator Standards

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Date achieved compliance: 05/01/2004
Evaluation lead agency: EPA

Evaluation date: 09/09/2003
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Air Emission Standards - Tank/Sl/Container
Date achieved compliance: 05/01/2004
Evaluation lead agency: EPA

Evaluation date: 09/28/2000
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/30/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/20/1996
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/15/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/20/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/03/1991
Evaluation lead agency: State

Evaluation date: 02/04/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/03/1991
Evaluation lead agency: State

Evaluation date: 03/04/1986
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 01/09/1987
Evaluation lead agency: State

Evaluation date: 12/04/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 01/09/1987
Evaluation lead agency: State

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Evaluation date: 09/18/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/09/1987
Evaluation lead agency: State

AST:

Type: ACTIVE
Owner Name: Libra Industries Inc of Michigan
Owner Address: Po Box 1105
Owner City,St,Zip: Jackson, MI 49204-1105
Owner County: USA
Owner Contact: Not reported
Owner Telephone: (517) 787-5675
Facility ID: 91038546
District: Jackson District Office
Contact: Ric Carroll
Facility Phone: (517) 787-5675
Tank ID: 1
Tank Status: Removed from Premises
Capacity: 5000
Install Date: Not reported
Close Date: Nov 10 2003
Content: Mineral Springs
Latitude: 42.2654680000
Longitude: -84.4117050000
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Description of Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Nu

Type: ACTIVE
Owner Name: Libra Industries Inc of Michigan
Owner Address: Po Box 1105
Owner City,St,Zip: Jackson, MI 49204-1105
Owner County: USA
Owner Contact: Not reported
Owner Telephone: (517) 787-5675
Facility ID: 91038546
District: Jackson District Office
Contact: Ric Carroll
Facility Phone: (517) 787-5675
Tank ID: 2
Tank Status: Removed from Premises
Capacity: 2500
Install Date: Not reported
Close Date: Nov 10 2003
Content: Mineral Springs
Latitude: 42.2654680000
Longitude: -84.4117050000
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Source: STATE OF MICHIGAN
Point Line Area: POINT
Description of Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Nu

Type: ACTIVE
Owner Name: Libra Industries Inc of Michigan
Owner Address: Po Box 1105
Owner City,St,Zip: Jackson, MI 49204-1105
Owner County: USA
Owner Contact: Not reported
Owner Telephone: (517) 787-5675
Facility ID: 91038546
District: Jackson District Office
Contact: Ric Carroll
Facility Phone: (517) 787-5675
Tank ID: 3
Tank Status: Removed from Premises
Capacity: 1500
Install Date: Not reported
Close Date: Nov 10 2003
Content: Flammable Liquid
Latitude: 42.2654680000
Longitude: -84.4117050000
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83

Source: STATE OF MICHIGAN
Point Line Area: POINT
Description of Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Nu

Type: ACTIVE
Owner Name: Libra Industries Inc of Michigan
Owner Address: Po Box 1105
Owner City,St,Zip: Jackson, MI 49204-1105
Owner County: USA
Owner Contact: Not reported
Owner Telephone: (517) 787-5675
Facility ID: 91038546
District: Jackson District Office
Contact: Ric Carroll
Facility Phone: (517) 787-5675
Tank ID: 4
Tank Status: Currently In Use
Capacity: 5000
Install Date: Dec 13 1988
Close Date: Not reported
Content: FL/CL
Latitude: 42.2654680000
Longitude: -84.4117050000
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Point Line Area: POINT
Description of Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Nu

Type: ACTIVE
Owner Name: Libra Industries Inc of Michigan
Owner Address: Po Box 1105
Owner City,St,Zip: Jackson, MI 49204-1105
Owner County: USA
Owner Contact: Not reported
Owner Telephone: (517) 787-5675
Facility ID: 91038546
District: Jackson District Office
Contact: Ric Carroll
Facility Phone: (517) 787-5675
Tank ID: 5
Tank Status: Removed from Premises
Capacity: 1500
Install Date: Not reported
Close Date: Aug 1 1998
Content: Flammable Liquid
Latitude: 42.2654680000
Longitude: -84.4117050000
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Description of Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Nu

CERC-NFRAP:

Site ID: 0502573
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

CERCLIS-NFRAP Site Alias Name(s):

Alias Name: LIBRA IND INC
Alias Address: ADDRESS UNREPORTED
JACKSON, MI 49204
Site Description: Not reported

CERCLIS-NFRAP Assessment History:

Action: DISCOVERY
Date Started: Not reported
Date Completed: 03/01/1973
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 06/28/1985
Priority Level: Low

Action: SITE INSPECTION
Date Started: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LIBRA INDUSTRIES INC OF MICHIGAN (Continued)

1000352504

Date Completed: 04/01/1987
Priority Level: NFRAP (No Further Remedial Action Planned)

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 09/24/1993
Priority Level: Not reported

60
SSE
1/2-1
0.916 mi.
4838 ft.

JACKSON MGP
703 AIRLINE DRIVE
JACKSON, MI 49204

SHWS **S105144153**
N/A

Relative:
Higher

SHWS:
Facility ID: 38000286
Source: Gas Production & Distribution
SAM Score: 31 out of 48
SAM Score Date: 01/21/2005
Township: 03s
Range: 01w
Section: 2b
Quarter: SW
Quarter/Quarter: Not reported
Facility Status: Interim Response in progress
Pollutant(s): CN; Metals; PNAs

Actual:
940 ft.

61
SE
1/2-1
0.956 mi.
5049 ft.

CERTAINTED CORPORATION
701 E WASHINGTON AVE
JACKSON, MI 49203

RCRA-SQG **1000430899**
SHWS **49203WLVN70**
FINDS
LUST
TRIS
UST
MANIFEST

Relative:
Higher

RCRA-SQG:
Date form received by agency: 03/06/2008
Facility name: CERTAINTED CORPORATION
Facility address: 701 E WASHINGTON AVE
JACKSON, MI 49203
EPA ID: MID099127102
Contact: PATRICK SEXTON
Contact address: 701 E WASHINGTON AVE
JACKSON, MI 49203
Contact country: Not reported
Contact telephone: (517) 796-5048
Contact email: Not reported
EPA Region: 05
Land type: Private
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Actual:
936 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

Owner/Operator Summary:

Owner/operator name: CERTAINTED CORPORATION
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1974
Owner/Op end date: Not reported

Owner/operator name: CERTAINTED CORPORATION
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1974
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: Yes

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: Yes

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 03/15/2007
Facility name: CERTAINTED CORPORATION
Classification: Small Quantity Generator

Date form received by agency: 02/28/2006
Facility name: CERTAINTED CORPORATION
Classification: Small Quantity Generator

Date form received by agency: 12/31/2003
Facility name: CERTAINTED CORPORATION
Classification: Small Quantity Generator

Date form received by agency: 11/04/1983
Facility name: CERTAINTED CORPORATION
Classification: Small Quantity Generator

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 08/01/2002
Date achieved compliance: 09/02/2002
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/02/2002
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 08/01/2002
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 09/02/2002
Evaluation lead agency: State

Evaluation date: 01/11/1996
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

SHWS:

Facility ID: 38000033
Source: Plastics Products
SAM Score: 30 out of 48
SAM Score Date: 05/24/2004
Township: 03s
Range: 01w
Section: 02
Quarter: NE
Quarter/Quarter: SW
Facility Status: Interim Response in progress
Pollutant(s): Benzene; TCE

FINDS:

Other Pertinent Environmental Activity Identified at Site

Registry ID: 110009904693

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AFS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:

Facility ID: 00012166
Source: STATE OF MICHIGAN
Owner Name: Wolverine Tech Inc
Owner Address: 701 Liberty St
Owner City,St,Zip: Jackson, MI 49203-1935

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

Owner Contact: Not reported
Owner Phone: (517) 787-8665
Country: USA
District: Jackson District Office
Site Name: Wolverine Technology
Latitude: 42.2448820000
Longitude: -84.3929260000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-0405-85
Release Date: Dec 10 1987
Substance Released: Not reported
Release Status: Open
Release Closed Date: Not reported

UST:

Facility ID: 00012166
Facility Type: CLOSED
Latitude: 42.2448820000
Longitude: -84.3929260000
Owner Name: Wolverine Tech Inc
Owner Address: 701 Liberty St
Owner City,St,Zip: Jackson, MI 49203-1935
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (517) 787-8665
Contact: GORDON F. HENDRICK
Contact Phone: (517) 787-8665
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: **Closed in Ground**
Capacity: 11500
Install Date: May 6 1969
Product: Used Oil
Remove Date: Jul 9 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

Tank Status: Closed in Ground
Capacity: 5000
Install Date: May 6 1969
Product: Used Oil
Remove Date: Jul 9 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
Tank Status: Closed in Ground
Capacity: 2000
Install Date: May 6 1969
Product: Diesel
Remove Date: Jul 9 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Closed in Ground
Capacity: 11500
Install Date: May 6 1969
Product: Used Oil
Remove Date: Jul 9 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

NY MANIFEST:

EPA ID: MID099127102
Facility Name: WOLVERINE TECHNOLOGIES
Facility Address: 701LIBERTY ST
Facility City: JACKSON
Facility Address 2: Not reported
Country: USA
Mailing Name: WOLVERINE TECHNOLOGIES
Mailing Contact: DANIEL M DIXON
Mailing Address: 701 LIBERTY ST
Mailing Address 2: Not reported
Mailing City: JACKSON
Mailing State: MI
Mailing Zip: 49203
Mailing Zip4: Not reported
Mailing Country: USA
Mailing Phone: 517-787-8665

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CERTAINTED CORPORATION (Continued)

1000430899

Document ID: NYB6756111
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: Not reported
Trans2 State ID: DC001
Generator Ship Date: 950223
Trans1 Recv Date: 950223
Trans2 Recv Date: 950321
TSD Site Recv Date: 950323
Part A Recv Date: 950303
Part B Recv Date: 950403
Generator EPA ID: MID099127102
Trans1 EPA ID: DCD981735244
Trans2 EPA ID: DCD981735244
TSDF ID: NYD048148175
Waste Code: D009 - MERCURY 0.2 MG/L TCLP
Quantity: 00400
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100
Year: 95
Manifest Tracking Num: Not reported
Import Ind: Not reported
Export Ind: Not reported
Discr Quantity Ind: Not reported
Discr Type Ind: Not reported
Discr Residue Ind: Not reported
Discr Partial Reject Ind: Not reported
Discr Full Reject Ind: Not reported
Manifest Ref Num: Not reported
Alt Fac RCRA Id: Not reported
Alt Fac Sign Date: Not reported
Mgmt Method Type Code: Not reported

K62 MI DEPT/ENVIRONMENTAL QUALITY
SSE 919 AMUR ST
1/2-1 JACKSON, MI 49203
0.997 mi.
5266 ft. Site 1 of 2 in cluster K

SHWS 1000420809
FINDS MID005346523
BROWNFIELDS
RCRA-NonGen

Relative: SHWS:
Higher Facility ID: 38000335
Source: Not reported
Actual: SAM Score: 35 out of 48
937 ft. SAM Score Date: 10/29/2004
Township: 3s
Range: 1w
Section: 2
Quarter: NW
Quarter/Quarter: SE
Facility Status: Evaluation conducted
Pollutant(s): Forge

FINDS:
Other Pertinent Environmental Activity Identified at Site

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/ENVIRONMENTAL QUALITY (Continued)

1000420809

Registry ID: 110003580072

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency: 01/25/2005
Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Facility address: 919 AMUR ST
JACKSON, MI 49203
EPA ID: MID005346523
Mailing address: 301 E LOUIS B GLICK HWY
JACKSON, MI 49203
Contact: LORI ARONOFF
Contact address: 919 AMUR ST
JACKSON, MI 49203
Contact country: Not reported
Contact telephone: (517) 780-7839
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: MI DEPT OF ENVIRONMENTAL QUALITY
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: State
Owner/Operator Type: Operator
Owner/Op start date: 01/25/2005
Owner/Op end date: Not reported

Owner/operator name: CITY OF JACKSON
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 01/25/2005
Owner/Op end date: Not reported

Owner/operator name: CITY OF JACKSON
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Owner

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/ENVIRONMENTAL QUALITY (Continued)

1000420809

Owner/Op start date: 01/25/2005
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 12/31/2001
Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Classification: Not a generator, verified

Date form received by agency: 05/27/1988

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MI DEPT/ENVIRONMENTAL QUALITY (Continued)

1000420809

Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Classification: Not a generator, verified

Violation Status: No violations found

K63
SSE
1/2-1
0.999 mi.
5276 ft.

EATON CORP- EAST ST
300 S EAST ST
JACKSON, MI

Site 2 of 2 in cluster K

SHWS **S108632546**
N/A

Relative:
Higher

SHWS:

Facility ID: 38000385
Source: Not reported
SAM Score: 40 out of 48
SAM Score Date: 01/31/2006
Township: 03S
Range: 01W
Section: 02
Quarter: Not reported
Quarter/Quarter: Not reported

Actual:
938 ft.

Facility Status: Evaluation in progress
Pollutant(s): Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
NO SITES FOUND					

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/02/2009	Source: EPA
Date Data Arrived at EDR: 02/12/2009	Telephone: N/A
Date Made Active in Reports: 03/30/2009	Last EDR Contact: 04/20/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/23/2009	Source: EPA
Date Data Arrived at EDR: 04/28/2009	Telephone: N/A
Date Made Active in Reports: 05/19/2009	Last EDR Contact: 04/20/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 05/17/2009
Number of Days to Update: 56	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/02/2009	Source: EPA
Date Data Arrived at EDR: 02/12/2009	Telephone: N/A
Date Made Active in Reports: 03/30/2009	Last EDR Contact: 04/20/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2009	Source: EPA
Date Data Arrived at EDR: 01/30/2009	Telephone: 703-412-9810
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 05/29/2009
Number of Days to Update: 101	Next Scheduled EDR Contact: 07/13/2009
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007	Source: EPA
Date Data Arrived at EDR: 12/06/2007	Telephone: 703-412-9810
Date Made Active in Reports: 02/20/2008	Last EDR Contact: 06/15/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/14/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2009	Source: EPA
Date Data Arrived at EDR: 04/02/2009	Telephone: 800-424-9346
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 06/01/2009
Number of Days to Update: 39	Next Scheduled EDR Contact: 08/31/2009
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/30/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 109

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 05/12/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Contaminated Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/15/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 2

Source: Department of Environmental Quality
Telephone: 517-373-9541
Last EDR Contact: 05/20/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/03/2009
Date Data Arrived at EDR: 02/04/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 56

Source: Department of Environmental Quality
Telephone: 517-335-4035
Last EDR Contact: 05/27/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Sites

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/19/2009
Date Data Arrived at EDR: 03/11/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 21

Source: Department of Environmental Quality
Telephone: 517-373-9837
Last EDR Contact: 06/11/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009	Source: EPA Region 1
Date Data Arrived at EDR: 02/19/2009	Telephone: 617-918-1313
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/24/2009	Source: EPA Region 4
Date Data Arrived at EDR: 03/03/2009	Telephone: 404-562-8677
Date Made Active in Reports: 05/05/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 63	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/20/2009	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2009	Telephone: 214-665-6597
Date Made Active in Reports: 05/29/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 9	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009	Source: EPA Region 7
Date Data Arrived at EDR: 05/20/2009	Telephone: 913-551-7003
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 05/20/2009
Number of Days to Update: 28	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 06/01/2009	Source: EPA Region 8
Date Data Arrived at EDR: 06/03/2009	Telephone: 303-312-6271
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 14	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/15/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/16/2008	Telephone: 415-972-3372
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 90	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 06/04/2009	Source: EPA Region 10
Date Data Arrived at EDR: 06/05/2009	Telephone: 206-553-2857
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 12	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal registered storage tank lists

UST: Underground Storage Tank Facility List

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/09/2009
Date Data Arrived at EDR: 03/11/2009
Date Made Active in Reports: 04/10/2009
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 517-335-4035
Last EDR Contact: 03/11/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Annually

AST: Aboveground Tanks

Registered Aboveground Storage Tanks.

Date of Government Version: 03/09/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 04/14/2009
Number of Days to Update: 28

Source: Department of Environmental Quality
Telephone: 517-373-8168
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: No Update Planned

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/24/2009
Date Data Arrived at EDR: 03/03/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 06/04/2009
Date Data Arrived at EDR: 06/05/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 12

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/20/2009	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2009	Telephone: 214-665-7591
Date Made Active in Reports: 05/29/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 9	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008	Source: EPA Region 7
Date Data Arrived at EDR: 12/30/2008	Telephone: 913-551-7003
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 05/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 06/01/2009	Source: EPA Region 8
Date Data Arrived at EDR: 06/03/2009	Telephone: 303-312-6137
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 14	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/15/2008	Source: EPA Region 9
Date Data Arrived at EDR: 12/16/2008	Telephone: 415-972-3368
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 05/17/2009
Number of Days to Update: 90	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

AUL: Engineering and Institutional Controls

A listing of sites with institutional and/or engineering controls in place.

Date of Government Version: 04/07/2009	Source: Department of Environmental Quality
Date Data Arrived at EDR: 04/07/2009	Telephone: 517-373-4828
Date Made Active in Reports: 05/22/2009	Last EDR Contact: 06/22/2009
Number of Days to Update: 45	Next Scheduled EDR Contact: 09/21/2009
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008	Source: EPA, Region 1
Date Data Arrived at EDR: 04/22/2008	Telephone: 617-918-1102
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields and USTfield Site Database

All state funded Part 201 and 213 sites, as well as LUST sites that have been redeveloped by private entities using the BEA process. Be aware that this is not a list of all of the potential brownfield sites in Michigan.

Date of Government Version: 04/13/2009	Source: Department of Environmental Quality
Date Data Arrived at EDR: 04/14/2009	Telephone: 517-373-4805
Date Made Active in Reports: 05/22/2009	Last EDR Contact: 06/15/2009
Number of Days to Update: 38	Next Scheduled EDR Contact: 08/17/2009
	Data Release Frequency: Varies

BROWNFIELDS 2: Brownfields Building and Land Site Locations

A listing of brownfield building and land site locations. The listing is a collaborative effort of Michigan Economic Development Corporation, Michigan Economic Developers Association, Detroit Edison, Detroit Area Commercial Board of Realtors

Date of Government Version: 04/09/2007	Source: Economic Development Corporation
Date Data Arrived at EDR: 04/10/2007	Telephone: 888-522-0103
Date Made Active in Reports: 05/01/2007	Last EDR Contact: 03/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 06/22/2009
	Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/14/2008	Telephone: 202-566-2777
Date Made Active in Reports: 12/23/2008	Last EDR Contact: 05/20/2009
Number of Days to Update: 39	Next Scheduled EDR Contact: 07/13/2009
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 06/21/2009
Next Scheduled EDR Contact: 09/21/2009
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST LF: Inactive Solid Waste Facilities

The database contains historical information and is no longer updated.

Date of Government Version: 03/01/1997
Date Data Arrived at EDR: 02/28/2003
Date Made Active in Reports: 03/06/2003
Number of Days to Update: 6

Source: Department of Environmental Quality
Telephone: 517-335-4034
Last EDR Contact: 02/28/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

DEL SHWS: Delisted List of Contaminated Sites

Sites that have been delisted or deleted from the List of Contaminated Sites. The available documentation for the site does not support its listing or the site no longer meets criteria specified in rules.

Date of Government Version: 02/20/2009
Date Data Arrived at EDR: 02/20/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 40

Source: Department of Environmental Quality
Telephone: 517-373-9541
Last EDR Contact: 05/18/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab locations.

Date of Government Version: 10/20/2008

Date Data Arrived at EDR: 11/18/2008

Date Made Active in Reports: 11/21/2008

Number of Days to Update: 3

Source: Department of Community Health

Telephone: 517-373-3740

Last EDR Contact: 05/21/2009

Next Scheduled EDR Contact: 08/17/2009

Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/29/2009

Date Data Arrived at EDR: 06/03/2009

Date Made Active in Reports: 06/17/2009

Number of Days to Update: 14

Source: Environmental Protection Agency

Telephone: 202-564-6023

Last EDR Contact: 05/18/2009

Next Scheduled EDR Contact: 08/17/2009

Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005

Date Data Arrived at EDR: 12/11/2006

Date Made Active in Reports: 01/11/2007

Number of Days to Update: 31

Source: Department of the Navy

Telephone: 843-820-7326

Last EDR Contact: 06/08/2009

Next Scheduled EDR Contact: 09/07/2009

Data Release Frequency: Varies

LIENS: Lien List

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC * 9607(1) and similar state or local laws. In other words: a lien placed upon a property's title due to an environmental condition

Date of Government Version: 03/24/2009

Date Data Arrived at EDR: 05/15/2009

Date Made Active in Reports: 05/22/2009

Number of Days to Update: 7

Source: Department of Environmental Quality

Telephone: 517-373-9837

Last EDR Contact: 05/12/2009

Next Scheduled EDR Contact: 11/10/2008

Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/2009

Date Data Arrived at EDR: 04/16/2009

Date Made Active in Reports: 05/29/2009

Number of Days to Update: 43

Source: U.S. Department of Transportation

Telephone: 202-366-4555

Last EDR Contact: 04/16/2009

Next Scheduled EDR Contact: 07/13/2009

Data Release Frequency: Annually

PEAS: Pollution Emergency Alerting System

Environmental pollution emergencies reported to the Department of Environmental Quality such as tanker accidents, pipeline breaks, and release of reportable quantities of hazardous substances.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/30/2009
Date Data Arrived at EDR: 05/01/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 21

Source: Department of Environmental Quality
Telephone: 517-373-8427
Last EDR Contact: 05/01/2009
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/27/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 04/23/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 18

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/21/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/23/2009
Date Data Arrived at EDR: 04/28/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 21

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 03/24/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 42

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/24/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 04/09/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 69

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/16/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/14/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 06/15/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 09/14/2009
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006	Source: EPA
Date Data Arrived at EDR: 03/14/2008	Telephone: 202-564-4203
Date Made Active in Reports: 04/18/2008	Last EDR Contact: 05/18/2009
Number of Days to Update: 35	Next Scheduled EDR Contact: 07/13/2009
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 03/20/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/20/2009	Telephone: 202-564-5088
Date Made Active in Reports: 05/05/2009	Last EDR Contact: 04/13/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/13/2009
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 02/26/2009	Source: EPA
Date Data Arrived at EDR: 05/20/2009	Telephone: 202-566-0500
Date Made Active in Reports: 05/29/2009	Last EDR Contact: 05/04/2009
Number of Days to Update: 9	Next Scheduled EDR Contact: 08/03/2009
	Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/02/2009	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 04/24/2009	Telephone: 301-415-7169
Date Made Active in Reports: 05/19/2009	Last EDR Contact: 03/30/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/29/2009
	Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/28/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/29/2009	Telephone: 202-343-9775
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 04/29/2009
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/28/2009	Source: EPA
Date Data Arrived at EDR: 05/01/2009	Telephone: (312) 353-2000
Date Made Active in Reports: 05/19/2009	Last EDR Contact: 03/30/2009
Number of Days to Update: 18	Next Scheduled EDR Contact: 06/29/2009
	Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 92

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaning Establishments
A listing of drycleaning facilities in Michigan.

Date of Government Version: 02/18/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 15

Source: Department of Environmental Quality
Telephone: 517-335-4586
Last EDR Contact: 05/11/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

NPDES: List of Active NPDES Permits

General information regarding NPDES (National Pollutant Discharge Elimination System) permits and NPDES Storm Water permits.

Date of Government Version: 04/28/2009
Date Data Arrived at EDR: 04/29/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 23

Source: Department of Environmental Quality
Telephone: 517-241-1300
Last EDR Contact: 04/29/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Varies

AIRS: Permit and Emissions Inventory Data
Permit and emissions inventory data.

Date of Government Version: 05/22/2007
Date Data Arrived at EDR: 10/19/2007
Date Made Active in Reports: 11/05/2007
Number of Days to Update: 17

Source: Department of Environmental Quality
Telephone: 517-373-7074
Last EDR Contact: 04/17/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Varies

BEA: BASELINE ENVIRONMENTAL ASSESSMENT DATABASE

A Baseline Environmental Assessment (BEA) allows people to purchase or begin operating at a facility without being held liable for existing contamination. BEAs are used to gather enough information about the property being transferred so that existing contamination can be distinguished from any new releases that might occur after the new owner or operator takes over the property.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 04/09/2009
Number of Days to Update: 9

Source: DEPT. OF ENVIRONMENTAL QUALITY
Telephone: 517-373-9541
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Semi-Annually

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/13/2009
Date Data Arrived at EDR: 04/14/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 06/22/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 12/11/2008
Date Made Active in Reports: 03/19/2009
Number of Days to Update: 98

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 06/12/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 05/05/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 17

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 05/05/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 02/25/2009
Date Made Active in Reports: 03/12/2009
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/27/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/02/2008
Number of Days to Update: 21

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/11/2009
Number of Days to Update: 27

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 07/06/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Centers, Group & Family Homes

Source: Bureau of REgulatory Services

Telephone: 517-373-8300

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Department of Natural Resources

Telephone: 517-241-2254

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

546 N. MECHANIC STREET
546 N. MECHANIC STREET
JACKSON, MI 49201

TARGET PROPERTY COORDINATES

Latitude (North):	42.25440 - 42° 15' 15.8"
Longitude (West):	84.4066 - 84° 24' 23.8"
Universal Transverse Mercator:	Zone 16
UTM X (Meters):	713934.7
UTM Y (Meters):	4681065.5
Elevation:	927 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	42084-C4 JACKSON NORTH, MI
Most Recent Revision:	1976
South Map:	42084-B4 JACKSON SOUTH, MI
Most Recent Revision:	1976

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

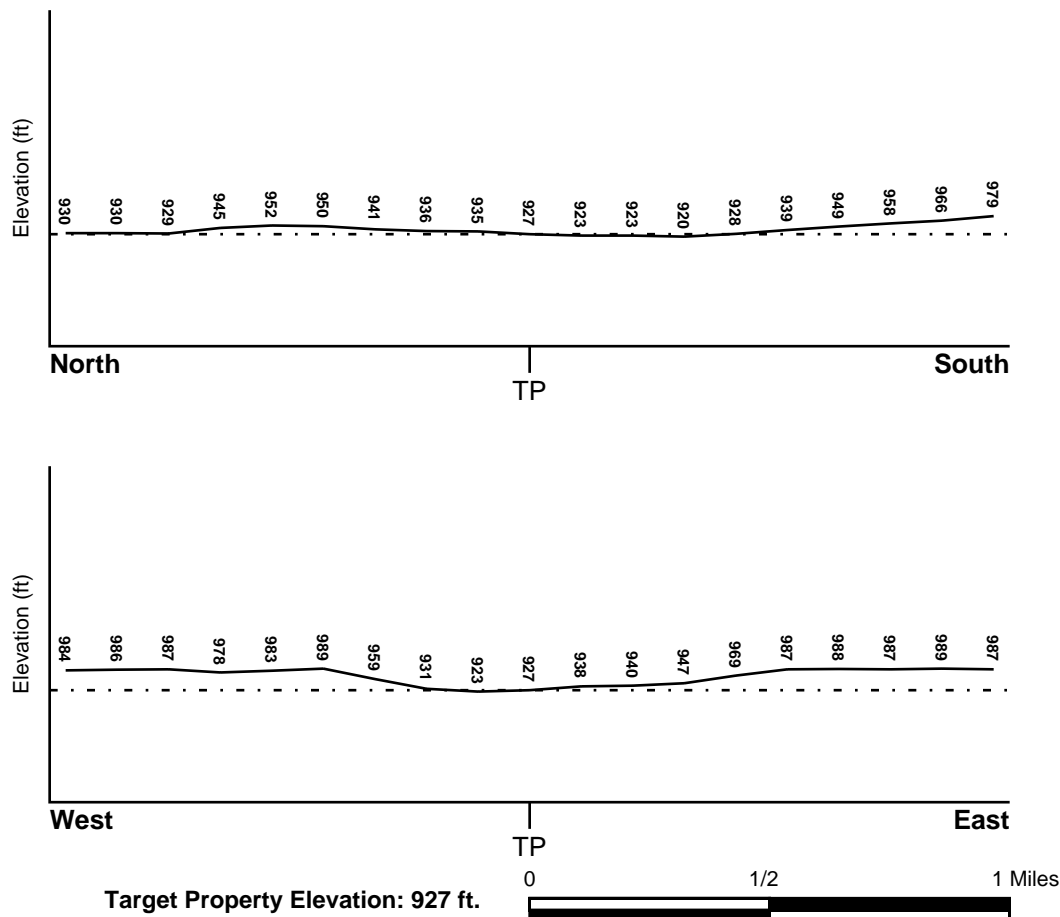
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u>	<u>FEMA Flood</u>
JACKSON, MI	<u>Electronic Data</u>
	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic</u>
JACKSON NORTH	<u>Data Coverage</u>
	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data:*

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION</u>	<u>GENERAL DIRECTION</u>
Not Reported	<u>FROM TP</u>	<u>GROUNDWATER FLOW</u>

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Paleozoic
System: Pennsylvanian
Series: Atokan and Morrowan Series
Code: PP1 (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBANLAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	60 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam

Surficial Soil Types: sandy loam

Shallow Soil Types: sandy loam
sandy clay loam

Deeper Soil Types: stratified
gravelly - sand
sandy loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
4	USGS2318406	1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

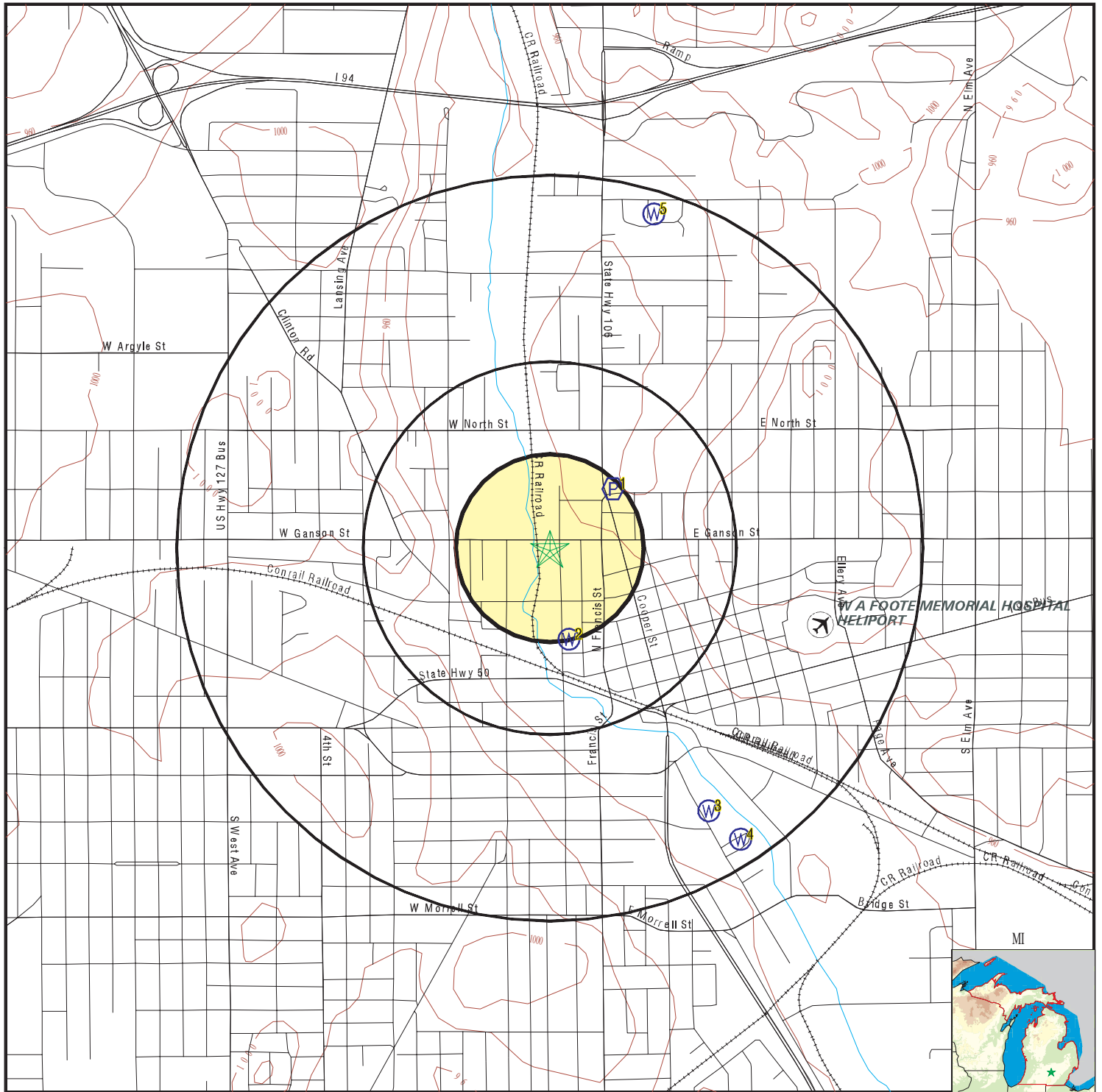
MAP ID	WELL ID	LOCATION FROM TP
1	MI0040236	1/8 - 1/4 Mile NE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

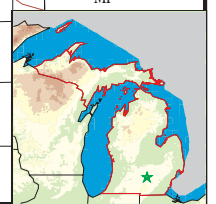
MAP ID	WELL ID	LOCATION FROM TP
2	MI20116228	1/8 - 1/4 Mile SSE
3	MI20116739	1/2 - 1 Mile SSE
5	MI20118127	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 2525346.1s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: 546 N. Mechanic Street
 ADDRESS: 546 N. Mechanic Street
 Jackson MI 49201
 LAT/LONG: 42.2544 / 84.4066

CLIENT: Applied Science & Technology
 CONTACT: Shawn Shadley
 INQUIRY #: 2525346.1s
 DATE: June 23, 2009 11:02 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
NE
1/8 - 1/4 Mile
Higher

FRDS PWS MI0040236

PWS ID: MI0040236
Date Initiated: 7706 Date Deactivated: Not Reported
PWS Name: MOBILE TRAILER VILLAGE
3245 E MICHIGAN AVE
JACKSON, MI 49202

Addressee / Facility: Not Reported

Facility Latitude: 42 15 24 Facility Longitude: 084 24 12
City Served: Not Reported
Treatment Class: Untreated Population: 00000204

Violations information not reported.

2
SSE
1/8 - 1/4 Mile
Lower

MI WELLS MI20116228

Wellid:	38000001220	Import id:	38720134001
County:	Jackson	Township:	Blackman
Town range:	02S 01W	Section:	34
Owner name:	R&J PLATING		
Well addr:	405 N MECHANIC ST		
Well depth:	150		
Well type:	TY3PU		
Wssn:	0		
Well num:	Not Reported	Driller id:	106
Const date:	1995-02-17 00:00:00.000	Case type:	STEBLA
Case dia:	6		
Case depth:	29		
Screen frm:	0		
Screen to:	0		
Swl:	8		
Test depth:	10		
Test hours:	2		
Test rate:	100	Test methd:	*U
Grout:	1	Pmp cpcity:	0
Latitude:	42.2508625649		
Longitude:	-84.4055875723		
Methd coll:	I1		
Elevation:	924		
Elev methd:	T1	Depth flag:	Not Reported
Elev flag:	Not Reported	Swl flag:	Not Reported
Elev dem:	922	Elev dif:	2
Elev miv:	924	Aq code:	U
Aq flag:	Not Reported	Pct aq:	0
Pct aq d:	0	Pct aq r:	0
Pct maq:	0	Pct maq d:	0
Pct maq r:	0	Pct cm:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pct cm d:	0	Pct cm r:	0
Pct pcm:	0	Pct pcm d:	0
Pct pcm r:	0	Pct na:	0
Pct na d:	0	Pct na r:	0
Pct flag:	Not Reported	Rock top:	-3
D r type:	Not Reported	Spc cpcity:	0
A thicknes:	0	A pct aq:	0
A pct maq:	0	A pct pcm:	0
A pct cm:	0	A pct na:	0
A thickns2:	0	A pct aq2:	0
A pct maq2:	0	A pct pcm2:	0
A pct cm2:	0	A pct na2:	0
A hit swl:	F	A hit top:	T
A hit rock:	F	A sc lith1:	Not Reported
A sc lmod1:	Not Reported	A sc lmaq1:	Not Reported
A sc lpct1:	0	A sc lith2:	Not Reported
A sc lmod2:	Not Reported	A sc lmaq2:	Not Reported
A sc lpct2:	0	Pct aq 1:	0
Pct maq 1:	0	Pct cm 1:	0
Pct pcm 1:	0	Pct na 1:	100
Pct aq 2:	0	Pct maq 2:	0
Pct cm 2:	0	Pct pcm 2:	0
Pct na 2:	100	Pct aq 3:	0
Pct maq 3:	0	Pct cm 3:	0
Pct pcm 3:	0	Pct na 3:	100
Pct aq 4:	0	Pct maq 4:	0
Pct cm 4:	0	Pct pcm 4:	0
Pct na 4:	100	Pct aq 5:	0
Pct maq 5:	0	Pct cm 5:	0
Pct pcm 5:	0	Pct na 5:	100
Pct aq 6:	0	Pct maq 6:	0
Pct cm 6:	0	Pct pcm 6:	0
Pct na 6:	100	Pct aq 7:	0
Pct maq 7:	0	Pct cm 7:	0
Pct pcm 7:	0	Pct na 7:	100
Pct aq 8:	0	Pct maq 8:	0
Pct cm 8:	0	Pct pcm 8:	0
Pct na 8:	0	Pct aq 9:	0
Pct maq 9:	0	Pct cm 9:	0
Pct pcm 9:	0	Pct na 9:	0
Pct aq 10:	0	Pct maq 10:	0
Pct cm 10:	0	Pct pcm 10:	0
Pct na 10:	0	Pct aq 11:	0
Pct maq 11:	0	Pct cm 11:	0
Pct pcm 11:	0	Pct na 11:	0
Pct aq 12:	0	Pct maq 12:	0
Pct cm 12:	0	Pct pcm 12:	0
Pct na 12:	0	Pct aq 13:	0
Pct maq 13:	0	Pct cm 13:	0
Pct pcm 13:	0	Pct na 13:	0
Within sec:	Y	Loc match:	Y
Aq code 1:	Not Reported		
Hit swl:	Not Reported		
Athk2:	0		
Horiz Conduct:	0		
Vert Conduct:	0		
T2:	0		
D50plek:	0		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database

EDR ID Number

3

SSE

1/2 - 1 Mile
Higher

MI WELLS

MI20116739

Wellid:	38000001755	Import id:	38730102301
County:	Jackson	Township:	Summit
Town range:	03S 01W	Section:	2
Owner name:	CITY OF JACKSON		
Well addr:	JACKSON WATER ST. WELL #1		
Well depth:	385		
Well type:	TY1PU		
Wssn:	3470		
Well num:	JACKSON WATER ST. WELL #1	Driller id:	0
Const date:	Not Reported	Case type:	*U
Case dia:	16		
Case depth:	0		
Screen frm:	0		
Screen to:	0		
Swl:	999.99		
Test depth:	0		
Test hours:	0		
Test rate:	1000	Test methd:	*U
Grout:	1	Pmp cpcity:	0
Latitude:	42.2441939461		
Longitude:	-84.3982843623		
Methd coll:	I1		
Elevation:	935		
Elev methd:	T1	Depth flag:	Not Reported
Elev flag:	Not Reported	Swl flag:	2
Elev dem:	928	Elev dif:	7
Elev miv:	935	Aq code:	R
Aq flag:	Not Reported	Pct aq:	84
Pct aq d:	63	Pct aq r:	87
Pct maq:	5	Pct maq d:	0
Pct maq r:	6	Pct cm:	6
Pct cm d:	0	Pct cm r:	7
Pct pcm:	0	Pct pcm d:	0
Pct pcm r:	0	Pct na:	0
Pct na d:	0	Pct na r:	0
Pct flag:	Not Reported	Rock top:	40
D r type:	AA	Spc cpcity:	0
A thicknes:	0	A pct aq:	0
A pct maq:	0	A pct pcm:	0
A pct cm:	0	A pct na:	0
A thickns2:	0	A pct aq2:	0
A pct maq2:	0	A pct pcm2:	0
A pct cm2:	0	A pct na2:	0
A hit swl:	F	A hit top:	F
A hit rock:	F	A sc lith1:	Not Reported
A sc lmod1:	Not Reported	A sc lmaq1:	Not Reported
A sc lpct1:	0	A sc lith2:	Not Reported
A sc lmod2:	Not Reported	A sc lmaq2:	Not Reported
A sc lpct2:	0	Pct aq 1:	25
Pct maq 1:	0	Pct cm 1:	0
Pct pcm 1:	0	Pct na 1:	75

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pct aq 2:	100	Pct maq 2:	0
Pct cm 2:	0	Pct pcm 2:	0
Pct na 2:	0	Pct aq 3:	0
Pct maq 3:	0	Pct cm 3:	0
Pct pcm 3:	0	Pct na 3:	0
Pct aq 4:	0	Pct maq 4:	0
Pct cm 4:	0	Pct pcm 4:	0
Pct na 4:	0	Pct aq 5:	0
Pct maq 5:	0	Pct cm 5:	0
Pct pcm 5:	0	Pct na 5:	0
Pct aq 6:	0	Pct maq 6:	0
Pct cm 6:	0	Pct pcm 6:	0
Pct na 6:	0	Pct aq 7:	0
Pct maq 7:	0	Pct cm 7:	0
Pct pcm 7:	0	Pct na 7:	0
Pct aq 8:	0	Pct maq 8:	0
Pct cm 8:	0	Pct pcm 8:	0
Pct na 8:	0	Pct aq 9:	0
Pct maq 9:	0	Pct cm 9:	0
Pct pcm 9:	0	Pct na 9:	0
Pct aq 10:	0	Pct maq 10:	0
Pct cm 10:	0	Pct pcm 10:	0
Pct na 10:	0	Pct aq 11:	0
Pct maq 11:	0	Pct cm 11:	0
Pct pcm 11:	0	Pct na 11:	0
Pct aq 12:	0	Pct maq 12:	0
Pct cm 12:	0	Pct pcm 12:	0
Pct na 12:	0	Pct aq 13:	0
Pct maq 13:	0	Pct cm 13:	0
Pct pcm 13:	0	Pct na 13:	0
Within sec:	Y	Loc match:	Y
Aq code 1:	R		
Hit swl:	F		
Athk2:	0		
Horiz Conduct:	300		
Vert Conduct:	300		
T2:	6000		
D50plek:	190.58371		

4
SSE
1/2 - 1 Mile
Higher

FED USGS USGS2318406

Agency cd:	USGS	Site no:	421435084234801
Site name:	03S 01W 02BDBA01 JACKSN		
Latitude:	421435		
Longitude:	0842348	Dec lat:	42.24309134
Dec lon:	-84.3966237	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	26
State:	26	County:	075
Country:	US	Land net:	Not Reported
Location map:	JACKSON SOUTH	Map scale:	24000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Altitude:	Not Reported		
Altitude method:	Not Reported		
Altitude accuracy:	Not Reported		
Altitude datum:	Not Reported		
Hydrologic:	Upper Grand. Michigan. Area = 1730 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19310101
Date inventoried:	Not Reported	Mean greenwich time offset:	EST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Confined single aquifer		
Aquifer:	SAGINAW FORMATION		
Well depth:	400	Hole depth:	400
Source of depth data:	Not Reported		
Project number:	Not Reported		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1976-06-09
Water quality data end date:	1989-09-05	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

5 NNE 1/2 - 1 Mile Higher

MI WELLS MI20118127

Wellid:	38000003313	Import id:	Not Reported
County:	Jackson	Township:	Blackman
Town range:	02S 01W	Section:	26
Owner name:	Luther G. Cox Jr.		
Well addr:	257 Rosehill Rd.		
Well depth:	222		
Well type:	HOSHL D		
Wssn:	0		
Well num:	Not Reported	Driller id:	1593
Const date:	2000-04-12 00:00:00.000	Case type:	PVCPLA
Case dia:	5		
Case depth:	83		
Screen frm:	0		
Screen to:	0		
Swl:	71		
Test depth:	222		
Test hours:	1		
Test rate:	35	Test methd:	AIR
Grout:	1	Pmp cpcity:	0
Latitude:	42.26737822		
Longitude:	-84.40115267		
Methd coll:	I1		
Elevation:	0		
Elev methd:	DEM30M	Depth flag:	Not Reported
Elev flag:	3	Swl flag:	Not Reported
Elev dem:	932	Elev dif:	932
Elev miv:	932	Aq code:	R
Aq flag:	Not Reported	Pct aq:	0
Pct aq d:	0	Pct aq r:	0
Pct maq:	0	Pct maq d:	0
Pct maq r:	0	Pct cm:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pct cm d:	0	Pct cm r:	0
Pct pcm:	0	Pct pcm d:	0
Pct pcm r:	0	Pct na:	0
Pct na d:	0	Pct na r:	0
Pct flag:	?	Rock top:	83
D r type:	Not Reported	Spc cpcity:	0
A thicknes:	0	A pct aq:	0
A pct maq:	0	A pct pcm:	0
A pct cm:	0	A pct na:	0
A thickns2:	0	A pct aq2:	0
A pct maq2:	0	A pct pcm2:	0
A pct cm2:	0	A pct na2:	0
A hit swl:	F	A hit top:	T
A hit rock:	F	A sc lith1:	Not Reported
A sc lmod1:	Not Reported	A sc lmaq1:	Not Reported
A sc lpct1:	0	A sc lith2:	Not Reported
A sc lmod2:	Not Reported	A sc lmaq2:	Not Reported
A sc lpct2:	0	Pct aq 1:	0
Pct maq 1:	0	Pct cm 1:	0
Pct pcm 1:	0	Pct na 1:	0
Pct aq 2:	0	Pct maq 2:	0
Pct cm 2:	0	Pct pcm 2:	0
Pct na 2:	0	Pct aq 3:	0
Pct maq 3:	0	Pct cm 3:	0
Pct pcm 3:	0	Pct na 3:	0
Pct aq 4:	0	Pct maq 4:	0
Pct cm 4:	0	Pct pcm 4:	0
Pct na 4:	0	Pct aq 5:	0
Pct maq 5:	0	Pct cm 5:	0
Pct pcm 5:	0	Pct na 5:	0
Pct aq 6:	0	Pct maq 6:	0
Pct cm 6:	0	Pct pcm 6:	0
Pct na 6:	0	Pct aq 7:	0
Pct maq 7:	0	Pct cm 7:	0
Pct pcm 7:	0	Pct na 7:	0
Pct aq 8:	0	Pct maq 8:	0
Pct cm 8:	0	Pct pcm 8:	0
Pct na 8:	0	Pct aq 9:	0
Pct maq 9:	0	Pct cm 9:	0
Pct pcm 9:	0	Pct na 9:	0
Pct aq 10:	0	Pct maq 10:	0
Pct cm 10:	0	Pct pcm 10:	0
Pct na 10:	0	Pct aq 11:	0
Pct maq 11:	0	Pct cm 11:	0
Pct pcm 11:	0	Pct na 11:	0
Pct aq 12:	0	Pct maq 12:	0
Pct cm 12:	0	Pct pcm 12:	0
Pct na 12:	0	Pct aq 13:	0
Pct maq 13:	0	Pct cm 13:	0
Pct pcm 13:	0	Pct na 13:	0
Within sec:	Y	Loc match:	Y
Aq code 1:	R		
Hit swl:	F		
Athk2:	0		
Horiz Conduct:	25.58777		
Vert Conduct:	.00071		
T2:	1612.0296		
D50plek:	172.31335		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

State Database: MI Radon

Radon Test Results

Test Type	Zip	Floor	Stop Date	Can 1 Res pCi/L	Can 1 Error	Can 2 Res pCi/L	Can 2 Error
Random	49201	1	4/3/87	0.7			
Random	49201	0	1/15/88	1.0	31.4%	0.	824.4%
Random	49201	0	12/9/87	3.9	24.8%		
Random	49201	0	4/22/87	7.2	8.8%		
Geographic	49201	0	4/7/88	7.1	6.2%		
					5.0%		

State Database: MI Radon

Radon Test Results

Zip	Less than sign	Pci/L
49201		2.90
49201		4.30
49201		5.30
49201		4.40
49201		4.90
49201		2.10
49201		1.80
49201	<	0.30
49201		4.00
49201		3.90
49201		6.40
49201		10.00
49201		1.00
49201		2.20
49201		20.00
49201		1.70
49201		9.30
49201		4.70
49201		4.80
49201		1.40
49201		4.70
49201		3.10
49201		0.50
49201		19.60
49201		4.10
49201		2.80
49201		1.80
49201		2.20
49201		2.10
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

		1.30
49201		2.20
49201		0.90
49201		4.70
49201	<	0.30
49201		2.10
49201		1.80
49201		6.80
49201		5.00
49201		5.20
49201		2.00
49201		2.30
49201		5.30
49201		3.20
49201		1.10
49201		5.40
49201		2.80
49201		8.10
49201		6.90
49201		8.40
49201		3.10
49201		4.60
49201		8.50
49201		4.30
49201		3.90
49201		1.50
49201		10.30
49201		16.00
49201		1.70
49201		5.30
49201		1.00
49201		6.10
49201		1.80
49201		8.90
49201		2.00
49201		1.10
49201		3.10
49201		1.50
49201		7.50
49201		7.10
49201		7.60
49201		10.30
49201		6.40
49201		3.80
49201		49.20
49201		0.80
49201		1.70
49201		16.40
49201		6.90
49201		2.20
49201		2.60
49201		5.30
49201		8.60
49201		12.00
49201		5.00
49201	<	0.30
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

		0.90
49201		5.30
49201		2.10
49201		1.00
49201		2.70
49201		0.70
49201		1.00
49201		2.50
49201		1.50
49201		1.60
49201		2.50
49201		1.40
49201		3.20
49201		2.20
49201		0.90
49201		6.40
49201		8.70
49201		3.70
49201		0.70
49201		5.00
49201		8.00
49201		1.70
49201		3.80
49201	<	0.30
49201		4.70
49201		1.70
49201		2.50
49201		6.00
49201		5.00
49201		10.40
49201		1.00
49201		4.20
49201		3.00
49201		12.80
49201		1.10
49201		10.10
49201		7.10
49201		6.70
49201		0.70
49201		2.80
49201		9.90
49201		1.10
49201		3.30
49201		2.00
49201		8.20
49201		7.20
49201		7.60
49201		4.70
49201		7.70
49201		2.30
49201	<	0.30
49201		6.90
49201		3.30
49201		2.70
49201		1.70
49201		7.00
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

	1.40
49201	1.50
49201	3.40
49201	4.50
49201	2.70
49201	4.20
49201	1.40
49201	10.90
49201	3.10
49201	10.20
49201	11.90
49201	2.60
49201	1.70
49201	2.30
49201	0.80
49201	0.50
49201	0.80
49201	3.40
49201	1.40
49201	1.10
49201	3.50
49201	19.20
49201	10.50
49201	3.70
49201	3.00
49201	6.80
49201	6.80
49201	0.80
49201	3.00
49201	3.40
49201	0.70
49201	1.00
49201	9.60
49201	9.90
49201	1.50
49201	5.40
49201	3.50
49201	7.20
49201	1.20
49201	1.10
49201	4.70
49201	5.00
49201	5.30
49201	2.30
49201	1.60
49201	3.10
49201	8.20
49201	2.50
49201	1.30
49201	6.20
49201	5.20
49201	9.40
49201	2.90
49201	1.20
49201	2.80
49201	6.20
49201	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

		9.10
49201		5.50
49201		2.80
49201		1.30
49201		4.70
49201		10.80
49201		1.90
49201		4.70
49201		4.70
49201		1.10
49201		1.10
49201	<	0.30
49201		5.50
49201		5.30
49201		3.50
49201		5.50
49201		43.30
49201	<	0.30
49201	<	0.30
49201	<	0.30
49201		46.10
49201		45.00
49201		51.20
49201		1.50
49201		2.20
49201		4.20
49201		2.30
49201		3.90
49201		1.80
49201		5.40
49201		2.20
49201		7.40
49201		1.00
49201		11.10
49201		2.50
49201		4.60
49201		11.80
49201		10.60
49201		7.40
49201		1.40
49201		5.40
49201		3.20
49201		8.10
49201		0.80
49201		4.80
49201		2.10
49201		31.70
49201	<	0.30
49201	<	0.30
49201		6.10
49201		10.70
49201		7.00
49201		7.00
49201		12.20
49201		12.50
49201		5.80
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

		5.50
49201		8.20
49201		2.00
49201		9.70
49201		1.00
49201		2.40
49201	<	0.30
49201		0.80
49201		0.80
49201		10.80
49201		13.10
49201		3.00
49201		1.30
49201		6.50
49201		3.90
49201		3.10
49201		5.90
49201		4.30
49201		3.00
49201		2.50
49201		2.90
49201		0.70
49201		14.20
49201		5.70
49201		1.10
49201		2.70
49201		6.50
49201		1.50
49201		3.10
49201		21.10
49201		4.00
49201		1.20
49201		8.50
49201		9.30
49201		9.30
49201		1.70
49201		7.20
49201		3.80
49201		2.50
49201	<	0.30
49201		2.20
49201		10.00
49201		4.80
49201		6.40
49201	<	0.30
49201		2.90
49201		2.30
49201		5.00
49201		1.00
49201		1.40
49201		8.10
49201		0.70
49201		0.80
49201	<	0.30
49201		1.50
49201		4.10
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

		1.10
49201		10.20
49201		0.60
49201	<	0.30
49201	<	0.30
49201		0.50
49201		0.50
49201		3.80
49201		11.20
49201		18.60
49201		5.30
49201		11.90
49201		10.30
49201		2.20
49201		0.70
49201	<	0.30
49201		8.70
49201		0.50
49201		12.40
49201		3.10
49201		7.10
49201		3.20
49201		4.80
49201		2.30
49201		1.90
49201		6.30
49201		1.50
49201		1.40
49201		3.20
49201		6.10
49201		1.80
49201		2.40
49201	<	0.30
49201		1.00
49201		12.70
49201		11.30
49201		17.10
49201		6.30
49201		9.80
49201		0.60
49201		12.40
49201		1.40
49201		6.90
49201		1.00
49201		7.50
49201		1.70
49201		1.40
49201		4.00
49201		2.50
49201		5.20
49201		2.20
49201		5.90
49201		1.30
49201		2.00
49201		3.90
49201		3.60
49201		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

	0.70
49201	6.60
49201	7.70
49201	4.70
49201	6.90
49201	2.90
49201	6.20
49201	4.60
49201	0.70
49201	3.60
49201	6.20
49201	7.50
49201	4.00
49201	12.20
49201	12.50
49201	6.50
49201	2.90
49201	3.00
49201	4.10
49201	0.70
49201	0.60
49201	3.00
49201	4.10
49201	1.10
49201	2.90
49201	1.00
49201	5.50
49201	4.70

Federal EPA Radon Zone for JACKSON County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 49201

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.033 pCi/L	67%	33%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Department of Natural Resources

Telephone: 517-241-2254

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Data

Source: Department of Environmental Quality

Telephone: 517-335-9218

OTHER STATE DATABASE INFORMATION

Michigan Oil and Gas Wells

Source: Michigan Department of Natural Resources

Locations of oil and gas wells are compiled from permit records on file at the Geological Survey Division (GSD), Michigan Department of Natural Resources.

RADON

State Database: MI Radon

Source: Department of Environmental Quality

Telephone: 517-335-9551

Radon Test Results

Michigan Radon Test Results

Source: Department of Environmental Quality

Telephone: 517-335-8037

These results are from test kits distributed by the local health departments and used by Michigan residents. There is no way of knowing whether the devices were used properly, whether there are duplicates (or repeat verification) test (i.e., more than one sample per home), etc.

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

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Appendix I



LEAKING UNDERGROUND STORAGE TANK

CLOSURE REPORT

INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY. The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit this report within the stated time period may result in administrative penalties as provided for in Part 213, Section 21313a of 1994 PA 451, as amended.

FACILITY NAME: Jack Smith Beverages		FACILITY ID NUMBER: 0-034126	
ADDRESS: 546 North Mechanic Street			
CITY: Jackson, Michigan	ZIP: 48837	COUNTY: Jackson	
DATE(S) RELEASE DISCOVERED: November 5, 1990 and July 1, 1994		CONFIRMED RELEASE NUMBER(S): C-2286-90 C-679-94	
O/O NAME: Daniel L. Jacob & Company			
O/O ADDRESS: 2403 East High Street		STATE: Michigan	ZIP: 49203
CONTACT PERSON: Mr. Larry O. Dunn		PHONE NUMBER: 517-782-7191	

ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):

- a. Has the UST been emptied? ☒ YES ☐ NO (If no, explain why):
b. Has the UST system been properly closed? ☒ YES ☐ NO (If no, explain why):
2. Free product present: a. Currently? ☐ YES ☒ NO If YES, total gallons recovered since last report:
b. Previously? ☒ YES ☐ NO If YES, total gallons recovered to date: See Appendix A
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)? ☐ YES ☒ NO
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: None
5. Estimated distance and direction from point of release to nearest:
a. Private well: 1,500 Feet South-Southeast b. Municipal well: 5,000 Feet Northwest c. Surface water/wetland: 60 Feet West
6. Since last report: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: ~375,000
7. Totals to date: a. cubic yards of soil remediated: ~400 b. gallons of groundwater remediated: ~1,500,000
8. Michigan RBCA Site Classification (1-4): 4 Previous RBCA Site Classification (1-4): 1
9. Has contamination migrated off-site above Tier 1 Residential RBSLs ☐ YES ☒ NO
If YES, have off-site impacted parties been notified (per Section 21309a(3) of Part 213) ☐ YES ☐ NO
10. Is an institutional control required for contamination that has migrated or will migrate off-site? ☐ YES ☒ NO
11. Was site closure based on eliminating any groundwater pathway? ☐ YES ☒ NO

CERTIFICATION OF REPORT COMPLETION

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate and complete. I certify that it was submitted to the Storage Tank Division (STD) on November 30, 1999. (REQUIRED)

David W. Snider Nov. 30, 1999
CP Original Signature - (REQUIRED) Date

Hugh G. Heuvelhorst, CPG

PRINT QC Project Manager's Name

David W. Snider, CPG

PRINT CP's Name

MacKenzie Environmental Services, Inc.

CONSULTANT

4248 West Saginaw Hwy., Grand Ledge, MI 48837

ADDRESS

517-627-8408

TELEPHONE NO.

517-627-4470

FAX NO.

CERTIFICATION OF CLOSURE

1. Type of RBCA Evaluation: ☐ Tier 1 ☒ Tier 2 ☐ Tier 3
2. Closure report based on which type of land use?: ☐ Residential ☐ Commercial III ☐ Commercial IV ☒ Industrial
3. Institutional Controls: ☐ None ☒ Notice of Corrective Action ☒ Restrictive Covenant ☐ Other

I certify under penalty of law that corrective actions associated with the above referenced release at this facility were completed in accordance with Part 213, Act 451, P.A. 1994 as amended, and current departmental guidance and procedures available at the time the work was completed.

I further certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

David W. Snider
CP Signature - (REQUIRED)

Nov. 30, 1999
Date

PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE STD DISTRICT OFFICE, ACCORDING TO PAGE 2.

Section	Table of Contents	Page
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Instructions - Utilize the following checklist to ensure that all required information is provided in the Closure Report. Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the Closure Report must be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

If an Initial Assessment Report (IAR) and/or a Final Assessment Report (FAR) have not been submitted for this release, provide all required information from the IAR and/or FAR not included below.

1.0 PROJECT CHRONOLOGY

- | | |
|---|---------------|
| A. Provide the date and time the confirmed release(s) was/were discovered and reported. | Page 2 |
| B. Provide the IAR submittal date. | Not Submitted |
| C. Provide the FAR submittal date. | Page 3 |
| D. Provide dates for any other submittals. | Page 2 |

2.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED

2.1 IMMEDIATE RESPONSE ACTION IMPLEMENTATION

- | | |
|--|--------|
| If an IAR has not been previously submitted, provide all information requested in Section 1.0 of the IAR | Page 2 |
|--|--------|

2.2 FREE PRODUCT DISCOVERY AND REMOVAL

If free product has not been discovered, then proceed to Section 2.3.

- | | |
|--|------------|
| A. Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(xviii). Refer to the STD Operational Memorandum No. 7, <i>Identification, Reporting, and Recovery of Free Product at LUST Sites</i> . | Page 2 |
| B. Attach a final STD Free Product Recovery Status Report (EQP 3850) if not previously submitted. | Appendix A |

2.3 SITE ASSESSMENT ACTIVITIES

- | | |
|--|------------|
| A. If an IAR has not been previously submitted, provide all information requested in Section 3.0 of the IAR. | Pages 1-17 |
| B. If a FAR has not been previously submitted, provide all information requested in Section 2.0 of the FAR. | FAR |

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2.4 SITE CLASSIFICATION

- | | |
|---|------------|
| A. Indicate the current Site Classification Level, in accordance with STD Operational Memorandum No. 5, <i>Leaking Underground Storage Tank (LUST) Site Classification System</i> . | Page 17 |
| B. Provide a justification for this classification. Identify the current conditions that are the basis of the classification. | Pages 1-17 |
| C. Indicate whether the site classification has changed since the submission of the last report. | Page 17 |

2.5 TIERED EVALUATIONS AND CLEANUP GOALS

- | | |
|---|---------|
| A. Indicate whether a site-specific Tier II or Tier III evaluation has been conducted for this site. | Page 17 |
| B. If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumptions as defined in the STD Operational Memorandum No. 4, <i>Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank (LUST) Sites</i> . | Page 15 |

NOTE: If a Tier II evaluation was performed and described in the IAR or the FAR, explicitly indicate where different assumptions or site-specific information were used in this Tier II or Tier III evaluation and why the change was justified.

- | | |
|---|------------|
| C. Provide the calculations and reference citations supporting the development of the relevant Tier II or Tier III SSTLs. | Appendix D |
| D. Provide a table which compares the maximum remaining contaminant concentrations for each required parameter for all media to the appropriate RBSLs (as provided in the STD Operational Memorandum No. 4), and/or the calculated SSTLs. Identify all applicable land use scenario(s). | Tables 4-6 |

2.6 MODELING

Provide all modeling documentation. Refer to the STD Operational Memorandum No. 10 <i>Presentation of Tier 2 and 3 Groundwater Modeling Evaluations</i> .	FAR
---	-----

2.7 NOTICES AND RESTRICTIONS

If the closure does not require the use of institutional controls to restrict land or resource use, then proceed to Section 2.8.

NOTE: Draft copies of all Restrictive Covenants and Notices of Corrective Action for off-site institutional controls must be submitted to the STD for approval prior to filing. Refer to Operational Memorandum No. 12, *Institutional Controls and Public Notice Requirements and Procedures*.

Section	Table of Contents	Page
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- | | |
|--|------------|
| A. Submit copies of all notices or restrictions which have been filed, and provide proof of filing these notices or restrictions. If the person filing is not the property owner, attach a copy of the written permission for the filing from the property owner. | Appendix E |
| B. Identify the individuals or segments of the public which have been provided with notice of the proposed land use restrictions or limitations to be placed on resource use. Include the names and addresses of the affected parties (unless large segments of the public will be provided notice, e.g., users of a municipal water supply system). Include proof that notice was provided to the affected parties. | Page 16 |
| C. Provide a map depicting the location(s) of the individuals or segments of the noticed public. | Appendix E |
| D. Describe any alternate mechanism utilized to restrict exposure to regulated substances as defined in Section 324.21310a(3), and justify how this mechanism reliably restricts exposure to the regulated substances. | Page 16 |

2.8 PERMITS

List all discharge permits and/or permit exemptions that were required for the corrective action, and include the type of permit, permit number, application date, approval date and termination date.	Not Applicable
--	----------------

2.9 CORRECTIVE ACTION PLAN

- | | |
|--|-----------------------|
| A. Summarize the corrective action activities that resulted in release closure. Include the operating history of any active treatment systems. | Page 3 |
| B. Summarize the types of monitoring activities performed, including the media and parameters monitored. | Page 4 |
| C. Attach performance monitoring data. | Tables 2-3 |
| D. Describe and justify changes to the previously submitted Corrective Action Plan. | None |
| E. Provide the total volume of soil remediated, and include disposal location and proof of disposal (e.g., invoices, not load tickets) for all soils excavated subsequent to submittal of the last report, if appropriate. | Not Applicable |
| F. Provide the total volume of groundwater actively remediated to date, and include disposal documentation, if appropriate. | Page 1A
Appendix A |

3.0 CLOSURE VERIFICATION SAMPLING

3.1 SOIL CLOSURE VERIFICATION

NOTE: Verification sampling must be conducted whenever contaminated soils are identified but not remediated, including when contaminated soil is returned to an excavation after the removal of a UST.

Section	Table of Contents	Page
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A. Describe the soil verification sampling strategy applied at the site by providing the following:

1. A scaled site map which identifies the former extent of the soil contamination, and the soil verification sampling locations relative to existing site features. *(Multiple chemical contaminants and multiple sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)*
2. For a corrective action involving excavation, a scaled drawing(s) showing the floor and walls of the excavation and the associated sampling locations. The drawing should also depict the subsurface stratigraphy, soil types, fractures, discolored soil locations, adjoining conduits or potential migration pathways, and locations of former and existing UST system components, as appropriate.
3. A description of how the number and location of samples collected for soil verification purposes was established. If your sampling strategy differs from the MDEQ *Verification of Soil Remediation Guidance Document* and STD Operational Memorandum No. 9, *Groundwater and Soil Closure Verification Guidance*, provide justification.
4. A list of the analytical parameters used to verify the soil remediation.
5. A justification if all soil verification samples were not analyzed, preserved, and handled in accordance with the STD Operational Memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*.

Figure 12

Not
Applicable

FAR

Tables 4-6

Not
Applicable

B. Provide a table with laboratory data showing the results of all verification soil sampling performed to date for the required parameters. Refer to the STD Operational memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*. The table should include the following:

Tables 4-6

1. Sample ID
2. Sample depth
3. Date of collection
4. Dates of extraction and analysis
5. Method Detection Limits
6. Analytical method

(NOTE: The STD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)

C. Provide copies of all soil boring logs not previously submitted.

Not
Applicable

3.2 GROUNDWATER CLOSURE VERIFICATION

A. Describe the groundwater verification sampling strategy applied at the site by providing the following:

Section	Table of Contents	Page
1.	A scaled site map which identifies the former extent of groundwater contamination, the groundwater verification sampling locations relative to existing site features, and the groundwater flow direction(s). <i>(Multiple chemical contaminants and multiple aquifer/sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)</i>	Figures 7-10
2.	A description of how the sampling frequency and duration of sampling for groundwater verification purposes was established. If your sampling strategy differs from the STD Operational Memorandum No. 9.	Page 4
3.	A list of the analytical parameters used to verify groundwater closure	Page 4
4.	A justification if all groundwater verification samples were not analyzed, preserved, and handled in accordance with the STD Operational Memorandum No. 14 <i>Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.</i>	Not Applicable
B.	Provide a table with laboratory data showing the results of all verification groundwater sampling performed to date for the required parameters. Refer to the STD Operational Memorandum No. 14 <i>Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases.</i> The table should include the following:	Tables 2-3
1.	Sample ID	
2.	Sampling depth or screened interval	
3.	Date of collection	
4.	Dates of extraction and analysis	
5.	Method Detection Limits	
6.	Analytical method	
	<i>(NOTE: The STD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)</i>	
C.	Attach copies of the following:	
1.	Boring logs not previously submitted.	None
2.	Well construction diagrams not previously submitted.	None
3.	Potentiometric surface maps for each groundwater verification sampling event.	Figures 7-9
4.	Elevation data (USGS datum preferred), including top-of-casing and grade elevations, and depth to groundwater for each groundwater verification sampling event.	Table 1
3.3	CLOSURE VERIFICATION FOR OTHER MEDIA	
A.	Describe the verification sampling strategy for other media applied at the site.	Not Applicable
B.	Provide a scaled site map which identifies the verification sampling locations relative to existing site features and boundaries, if appropriate.	Not Applicable
C.	Provide a table with the laboratory data showing the results of all verification sampling performed to date in the other specified environmental media.	Not Applicable

EXECUTIVE SUMMARY

MacKenzie Environmental took over the responsibilities of Qualified Consultant of the Jack Smith Beverage leaking underground storage tank (LUST) site in Jackson, Michigan in October 1997. MacKenzie personnel examined historical data generated from the site and prepared a plan for a more thorough subsurface evaluation. A soil boring and groundwater sampling program was conducted in November 1997. Evaluation of this data led to the installation of two down-gradient groundwater monitor wells and the drilling of two additional soil borings near the source area in March 1998.

A *Final Assessment Report* was prepared and submitted to the Michigan Department of Environmental Quality (MDEQ) Storage Tank Division on May 7, 1998. The *Final Assessment Report* provided a historical presentation of all data generated from the site, a detailed evaluation of the site geology and hydrogeology, an exposure pathways analysis, a fate and transport modeling analysis, and a Corrective Action Plan.

The Corrective Action Plan was initiated with the installation of oxygen release compound (ORC®) in many of the monitor wells on the site within and adjacent to the groundwater plume. The ORC® provided dissolved oxygen to the groundwater to assist indigenous bacteria to degrade the fuel components. No ORC® was installed in the three groundwater monitor wells positioned at the northwest corner of the property and near the leading edge of the plume. Quarterly groundwater sampling was conducted on these three wells to monitor the effects of the up gradient ORC® treatment and dissolved plume migrating off site. The ORC® was removed from the wells in March 1999, and a full round of groundwater sampling was conducted three months later. The groundwater sampling indicates that the size and concentration of the plume has decreased as a result of the use of the ORC®. The quarterly groundwater sampling at the northwest corner of the property shows that dissolved concentrations of the fuel in the groundwater are consistently decreasing and that the leading edge of the plume is regressing.

Concentrations of fuel components in the soil underlying the site meet site-specific cleanup objectives for an industrial site. Soil impact has not migrated off site. The concentrations of fuel in the shallow non-potable groundwater under the site also meet the objectives for an industrial closure. The groundwater monitoring has demonstrated that the water migrating off site has not exceeded groundwater-surface water interface values for four consecutive quarters, and the trend in the data is towards lower concentrations. This meets requirements for an unrestricted closure for the off-site groundwater.

MacKenzie prepared a *Restrictive Covenant* for the impacted area of the subject property. The *Restrictive Covenant* has been recorded with the Register of Deeds along with a *Notice of Corrective Action to the Register of Deeds*. MacKenzie also prepared and presented notices of the site restrictions to the City of Jackson and the Jackson County Health Department. MacKenzie now recommends closure of this LUST site under industrial criteria with applicable site restrictions. No off-site restrictions are warranted since the groundwater meets unrestricted criteria at the property line.

INTRODUCTION

Background

The Jack Smith Beverages project is located at 546 North Mechanic Street, Jackson, Michigan. Jack Smith Beverages operated as a beverage distributor and was subsequently purchased by Daniel L. Jacob & Co., Inc. Daniel L. Jacob & Co. later moved from the property to larger facilities at another location. The property was sold on a land contract to Owen Machine & Tool, Inc. A property transaction is pending that will lead to transfer of the title of the property to Owen Machine & Tool. The location of the site is displayed on Figure 1.

On November 5, 1990, two underground storage tanks (USTs) were excavated, decommissioned, and removed from the site. Impacted soil was noted in the excavation. That same day the Michigan State Police Fire Marshal Division was notified of a release from the UST systems. The removed tanks were both 2,000-gallons in size and constructed of steel. One tank reportedly held unleaded gasoline, and the other held diesel fuel.

Envirologic Technologies, Inc. was retained as the environmental consultant for the project by Daniel L. Jacob & Co. Envirologic conducted an investigation of the site and submitted a *Site Investigation Report* to the MDEQ on September 25, 1991. The report summarized the results of a subsurface investigation which included soil and groundwater analytical data. The report also indicated the presence of free product in one groundwater monitor well, MW-8. Free product recovery ensued following its discovery. At the time of the *Site Investigation Report*, approximately 14 gallons of product were recovered by bailing.

Manual recovery of the free product continued. An *Interim Corrective Action Plan* was prepared and submitted on June 3, 1992. The *Interim Corrective Action Plan* stated that, as of that date, approximately 17 gallons of free product were recovered. The *Interim Corrective Action Plan* proposed remedial activities for the site. Soil vapor extraction was planned for the soil. Groundwater was to be extracted through a purge well located near MW-8 and through horizontal wells installed in the saturated zone in other areas of the property.

Feasibility studies for the installation of the remedial system were conducted in 1993. Installation of the system was performed in 1994. The system was on line beginning November 15, 1994. Extracted groundwater was sent through an oil-water separator and then treated with liquid-phase granular activated carbon. Product retained in the oil-water separator was collected in sealed 55-gallon drums. The treated groundwater was discharged to the sanitary sewer under Use Permit No. 33. The volume of the discharge was monitored. Periodic samples of the influent and effluent were collected to determine the effectiveness of the carbon treatment and the quality of the discharge.

The soil vapor extraction was performed using horizontal wells installed in trenches in the vadose zone. Alternating trenches were used for vapor extraction and injection of the treated air. The layout and installation of the underground portion of the remediation system caused three of the original

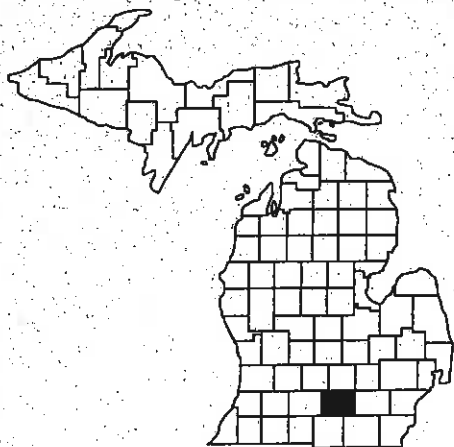


FIGURE 1

SITE LOCATION MAP

D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC STREET
JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
4248 West Saginaw Highway Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470

groundwater monitor wells (MW-1, MW-6, and MW-7) to be abandoned since their positions were in line with the trenches.

During the installation of the southern most remediation system trench, a previously unknown UST was encountered. On July 1, 1994, the 1,500-gallon tank was removed. The tank had held leaded gasoline, but contained water at the time of removal. It reportedly was sitting in water-saturated soil and had some holes. The tank was discovered at the south end of the study area and near MW-8, the well which was noted to have free product. The locations of all of the USTs are shown on Figure 2 along with the soil borings and monitor wells drilled by Envirologic.

The soil vapor extraction system operated for an undetermined length of time. Groundwater remedial activities continued at the site until October 1997. At that time, the groundwater pump system automatically shutdown for undetermined reasons. The total fluid meter entering the treatment system recorded the passage of 1,124,528 gallons. The project was transferred from Envirologic to MacKenzie Environmental Services, Inc. MacKenzie initiated an investigation of the site to determine the current subsurface conditions, and MacKenzie elected not to restart the groundwater pump system pending the evaluation of the data.

Final Assessment Report

During the late fall of 1997 and winter of 1998, MacKenzie conducted a subsurface investigation at the site to determine the present concentrations of fuel constituents in the subsurface. A total of 16 borings were advanced to examine subsurface geology and collect soil samples for laboratory analyses. Two additional groundwater monitor wells were drilled and installed at the northwest corner of the property to evaluate concentrations of fuel components dissolved in the groundwater near the property lines. Figure 3 displays the locations of borings and wells installed by MacKenzie Environmental.

The study was completed with the submittal of the *Final Assessment Report* to the MDEQ on May 7, 1999. That report presented details of the findings of the investigation, an exposure pathways analysis, applicable soil and groundwater cleanup goals, groundwater modeling, and a Corrective Action Plan. The Corrective Action Plan was successfully implemented. The details of remedial activities conducted by MacKenzie are presented in this report.

REMEDIAL ACTIVITIES AND MONITORING

Installation of ORC®

The Corrective Action Plan section of the *Final Assessment Report* was initiated on May 20, 1998. Oxygen release compound (ORC®) socks were installed in site wells as specified in the Corrective Action Plan. An approximate total of 58 pounds of ORC® were used.

Groundwater Sampling

Quarterly groundwater monitoring of the three wells at the northwest corner of the property (MW-4, MW-13, and MW-14) was begun on June 23, 1998. Although, historical sampling for all three wells dates back to March 17, 1998. The depth to water and depth to the bottom of each well was measured. From these measurements, the thickness of the water column in each well was calculated. This value was converted to the volume of water contained in the well casing. Five casing volumes of water were removed from each well before sampling. Purging and sample collection were performed with a dedicated disposable bailer.

Groundwater samples for organic analyses were transferred directly to two 40-milliliter glass vials with septum lids. After capping, the vials were inverted and checked for bubbles. If bubbles were present, the vial was opened and a small quantity of water was added to replace the lost volume. The sample containers were labeled, recorded on a chain of custody, and placed in a cooler with ice.

An additional quantity of groundwater was field tested for dissolved oxygen with a Hach titration test kit, model OX-2P. The test kit has a detection limit of 0.2 mg/l of dissolved oxygen. Samples for dissolved lead were mistakenly not collected during the June 23, 1998 sampling event.

Quarterly groundwater sampling from the three wells was conducted through September 14, 1999 with samples for dissolved lead collected each time. The groundwater samples for dissolved lead analysis were placed in a plastic canister. Pressure was applied to the canister, forcing the water through a 0.45-micron filter. The samples were then collected in a plastic bottle containing nitric acid as a preservative. The sample bottles were labeled, logged on a chain of custody, and placed in a cooler with ice.

The ORC® socks were removed from the wells on March 23, 1999. The wells were given three months to return to equilibrium with the surrounding saturated formation. On June 11, 1999, a full round of groundwater sampling was conducted. All monitor wells at the site were sampled for gasoline-related organic compounds, dissolved lead, and dissolved oxygen.

The samples for organic analyses were submitted to a laboratory and tested for gasoline-related organic compounds using USEPA method 8260. The dissolved lead samples were tested by USEPA method 6020.

Free Product Monitoring

During each site visit, MW-8 was checked for free product with a Keck interface probe. No free product has been noted in the well since the September 25, 1998 site visit. Appendix A contains a Free Product Status Report documenting the product monitoring. Occasionally, the recovery wells near MW-8 were checked for free product also; none was ever present.

During the corrective action portion of this project, MacKenzie arranged for the disposal of two drums of product and water. The drums of fluid were derived through the operation of the water

treatment system and oil-water separator prior to MacKenzie assuming responsibility for the project. A copy of the waste manifest is provided in Appendix A.

GEOLOGY AND HYDROGEOLOGY

Regional Setting

The Jackson area has a comparatively thin veneer of glacial deposits over the bedrock. The bedrock is encountered at depths between two to 50 feet below the surface in wells drilled in central Jackson. The upper 50 to 75 feet of the bedrock is predominantly shale with some interbedded sandstone and limestone noted on the boring logs. Below the shale section is a generally massive sandstone formation with occasional shale layers encountered. A regional cross section constructed from nearby well logs is shown in Figure 4.

The glacial deposits in the area are predominantly described as clayey glacial till. However, a sand layer appears to be present above the bedrock in of the Jack Smith Beverages site. This sand layer is found to be up to ten feet thick at the project site but thickens northward. It appears to fill a low area in the bedrock, as noted on well log number 36. The well logs used in the construction of the cross section are provided in Appendix B of the *Final Assessment Report*.

Site Setting

Geology

From the geological information gained during the drilling of the additional borings on site, MacKenzie Environmental was able to present a more complete interpretation of the subsurface geology than was presented by Envirologic. The geology of the unconsolidated materials is found to vary significantly. Figures 5 and 6 present two cross sections developed from the borings conducted on site. Imported fill material is present in the upper two to five feet of the subsurface. The fill consists primarily of silty sand with minor amounts of construction debris and wood. Below the fill, a silt and clay glacial till is encountered at most boring locations. However, some areas have a silt and sand deposit. A sand and gravel unit is noted on several of the borings logs underlying the glacial till and the silt and sand deposit. This sand and gravel unit contains a variable quantity of silt, which may effect its relative permeability. The bedrock is encountered at elevations between 911 and 917 feet (9 to 14 feet below ground level). The bedrock is comprised of shales and siltstones of the Michigan Formation of late Mississippian age. It is described as hard, dense, dry, and may be friable in the upper few feet.

The sand and gravel unit does not appear to be present consistently across the site. As shown on cross section B-B' in Figure 6, the borings for MW-5 and MW-9 did not indicate the presence of the sand and gravel layer above the bedrock. However, Envirologic did not collect spilt-barrel samples in a continuous profile in the borings for these wells. Additionally, displacement tests conducted on MW-5 indicate that this well is set in a permeable layer. Perhaps, the sand and gravel layer is

present at these two wells but is much thinner than it is at other boring locations. The sand and gravel unit may be thicker in the central portion of the site where there is an apparent low in the bedrock elevation.

The southeast corner of the study area appears to have a slab of bedrock incorporated into the unconsolidated glacial deposits. A few borings in this area, VSR-1, VSR-16, and RW-3 encountered a fine-grained sandstone at shallow depths (less than six feet). Offsets to some borings were drilled in an attempt to move around the obstruction. However, it is now clear that a sandstone slab of significant size is present, but it is likely broken into several large pieces.

Hydrogeology

Potable water for the city of Jackson is provided through a municipal distribution system. The water is derived from supply wells installed deep in the Marshall Sandstone, below the protection of the Michigan Formation. The nearest water supply well is located approximately one mile west-northwest of the subject site. The nearest private water supply wells are shown on the cross section as wells 35 and 36. These wells were drilled before an extensive water supply was available through the city. Well 35 was drilled in 1916 and provided water for the Eastern Michigan Power Company plant. Well 36 supplied water for the old State Prison. Both wells were completed in the bedrock and were likely abandoned years ago.

In drilling at the project site, a shallow non-potable groundwater was encountered in the sand and gravel unit above the bedrock. The groundwater may extend up into the silt and sand deposit where it overlies the sand and gravel unit and if water levels are elevated. Where the silt and clay glacial till overlies the sand and gravel, the groundwater may be semi-confined.

Table 1 summarizes water level measurements taken from the monitor wells and at the staff gage installed in the Grand River. The groundwater is encountered at depths between five and nine feet. Figures 7, 8, and 9 display the potentiometric surface elevations for different seasons of the year. The groundwater flow direction is consistently towards the northwest. The water level in the Grand River during the March 17, 1998 site visit was nearly two feet higher than the water level on June 11, 1999. Water levels in the wells on March 17, 1998 were also higher. This series of maps displays the fluctuations in the water elevations through the changing seasons. They also show the interaction between the groundwater and surface water. The average horizontal gradient of the potentiometric surface varies from 0.035 to 0.059 in the area between MW-8 and MW-3. However, it decreases between MW-2 and MW-4 to a range of only 0.010 to 0.015. An interpretation of the formation hydraulic conductivities and groundwater flow rates was presented in the *Final Assessment Report*.

With the staff gage positioned in the Grand River, the relationship between the surface water and groundwater can be evaluated. The groundwater appears to continue flowing northwest at the same horizontal gradient as noted near MW-4. The groundwater will likely discharge to the Grand River somewhere north of the Ganson Street bridge, an estimated 110 feet northwest of the subject property line. Based on the groundwater flow rate calculated near MW-4 in the *Final Assessment*

TABLE 1

WELL ELEVATIONS AND WATER LEVEL MEASUREMENTS

Well Number	Ground Elevation (Feet)	Casing Elevation (Feet)	Screened Interval (Feet)	November 12, 1997		November 20, 1997		November 26, 1997		March 17, 1998		June 11, 1999	
				Depth to Water (Feet)	Water Elevation (Feet)	Depth to Water (Feet)	Water Elevation (Feet)	Depth to Water (Feet)	Water Elevation (Feet)	Depth to Water (Feet)	Water Elevation (Feet)	Depth to Water (Feet)	Water Elevation (Feet)
MW-1	926.0	925.44	915.6 - 920.6	Well plugged during installation of remediation system									
MW-2	925.5	924.81	915.0 - 920.0	6.67	918.14	6.75	918.06	6.93	917.88	5.17	919.64	6.96	917.85
MW-3	925.2	924.49	914.7 - 919.7	5.77	918.72	5.91	918.58	6.07	918.42	4.48	920.01	6.04	918.45
MW-4	925.7	925.21	915.2 - 920.2	7.70	917.51	7.80	917.41	8.01	917.20	6.13	919.08	8.19	917.02
MW-5	925.7	924.94	915.2 - 920.2	6.79	918.15	6.86	918.08	7.03	917.91	5.38	919.56	7.21	917.73
MW-6	925.5	924.99	915.0 - 920.0	Well plugged during installation of remediation system.									
MW-7	926.9	926.25	916.4 - 921.4	Well plugged during installation of remediation system.									
MW-8	926.4	926.10 ¹	917.1 - 922.1	5.70	920.18	5.82	920.06	6.16	919.72	4.93	921.17	5.70	920.40
MW-9	928.8	928.37	912.8 - 917.8	8.41	919.96	8.46	919.91	8.48	919.89	8.30	920.07	8.31	920.06
MW-10	926.9	926.26	914.1 - 919.1	8.09	918.17	8.17	918.09	8.33	917.93	6.33	919.93	8.45	917.81
MW-11	926.1	925.59	915.9 - 920.9	7.28	918.31	7.35	918.24	7.43	918.16	5.80	919.79	7.52	918.07
MW-12	925.7	924.80	915.2 - 920.2	7.24	917.56	7.36	917.44	7.54	917.26	5.70	919.10	7.72	917.08
MW-13	926.0	925.62	912.8 - 916.8							6.51	919.11	8.56	917.06
MW-14	925.6	925.12	914.4 - 918.4							6.00	919.12	8.05	917.07
Staff Gauge - Grand River		916.75		0.50	917.25	0.44	917.19	0.18	916.93	1.92	914.83	0.00	916.75

1 - Well screen and casing for MW-8 was pulled up approximately 1.5 feet and cut off on March 3, 1998. Value reflects new top of casing elevation. Old casing elevation was 925.88 feet, which was used to calculate the water elevations for dates prior to March 3, 1998.

Report, groundwater would require about one and a half to two years to reach the Grand River from the subject property.

The shallow groundwater encountered at the site is clearly in a non-potable zone. The proximity of the groundwater to the surface and to the Grand River would preclude this water from being used as a drinking water source. The relatively thin and variable nature of the saturated permeable zone restricts the potential yield of any water supply well that would be installed in the formation. Therefore, with other sources of water available, it is highly unlikely that this shallow water would be exploited for any useful purpose.

Based on the nature of the bedrock witnessed by MacKenzie personnel during drilling operations and on descriptions recorded on boring logs by Envirollogic personnel, the bedrock should preclude the infiltration and downward migration of groundwater encountered in the sand and gravel unit above. The shale and siltstone is an aquitard and segregates the near-surface groundwater impact from the potable groundwater resources in the sandstone sections of the deeper bedrock.

GROUNDWATER ANALYTICAL RESULTS

Table 2 provides the results of groundwater laboratory analyses for the sampling event on June 11, 1999. All monitor wells were sampled on this day. Applicable restricted, generic, residential, risk-based screening levels are provided for comparison. Concentrations of gasoline-related compounds are still present in the groundwater under the site at moderate levels. However, none exceed the applicable screening levels cited on the table. Figure 10 shows an isoconcentration map of total benzene, toluene, ethylbenzene, and toluene (BTEX) dissolved in the groundwater for the June 11, 1999 sample event. With the exception of MW-2, the groundwater samples collected on June 11, 1999 showed a decrease in total BTEX concentrations for all wells when compared to the November 12, 1997 and March 17, 1998 sampling episodes, which were reported in the *Final Assessment Report*. The higher fuel concentrations experienced at MW-2 likely represent a slug migrating from up gradient that had not been exposed to the ORC®.

The laboratory reports for all groundwater sampling events since the submittal of the *Final Assessment Report* are provided in Appendix B of this report.

Field tests were conducted for dissolved oxygen in the groundwater during the June 11, 1999 sampling. The tests showed that dissolved oxygen was present in the groundwater at all but four of the monitor wells. This sampling and testing was performed three months after the removal of the ORC® socks. This period of time should have allowed the formation to stabilize after the application of the ORC®. The increase in concentrations of fuel compounds at MW-2 demonstrates the dissolved oxygen introduced at MW-2 had been consumed and that the formation had returned to equilibrium following the ORC® treatment. The distribution of dissolved oxygen is shown on Figure 11.

Table 3 summarizes the results of analytical testing of the groundwater samples collected by

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

June 11, 1999

Well Number	Screened Interval (Feet)	Concentrations (µg/l)										Dissolved Lead	Dissolved Oxygen
		Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	Ethylene Dibromide	1,3,5-TMB	1,2,4-TMB	2-Methyl-naphthalene	Naphthalene	
MW-2	915.0 - 920.0	1,300	360	920	3,000	<100	<20	<20	150	980	<100	240	<3
MW-3	914.7 - 919.7	2.5	2.6	1.2	4.4	<5	<1	<1	<1	1.8	<5	<5	18 ⁽¹⁾
MW-4	915.2 - 920.2	<1	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3
MW-5	915.2 - 920.2	<1	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3
MW-8	917.1 - 922.1	41	27	320	890	<25	<5	<5	36	1,500	<25	250	13
MW-9	912.8 - 917.8	<1	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3 ⁽¹⁾
MW-10	914.1 - 919.1	<1	<1	<1	<3	<5	<1	<1	<1	1.1	<5	<5	<3
MW-11	915.9 - 920.9	90	3.4	41	110	<5	<1	<1	17	100	<5	17	<3
MW-12	915.2 - 920.2	250	99	440	2,200	<50	<10	<10	240	820	<50	200	4.8
MW-13	912.8 - 916.8	20	<1	4.7	9.3	<5	<1	<1	1.3	35	<5	<5	<3
MW-14	914.4 - 918.4	1.3	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3 ⁽¹⁾
Volatilization to Indoor Air	5,600	C _{sol}	C _{sol}	C _{sol}	C _{sol}	C _{sol}	9,600	2,400	C _{sol}	C _{sol}	ID	C _{sol}	NLV
Groundwater Contact	9,200	C _{sol}	C _{sol}	C _{sol}	C _{sol}	580,000	11,000	17	C _{sol}	C _{sol}	ID	C _{sol}	ID
Water Solubility (C _{sol})	1.8 x 10 ⁶	530,000	170,000	190,000	4.7 x 10 ⁷	8.5 x 10 ⁶	4.2 x 10 ⁶	61,000	56,000	25,000	31,000	NA	NA

1 - Sediment noted in sample after field filtering.
ID - Insufficient data.

NA - Not applicable.
NLV - Compound not likely to volatilize.

TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR MONITOR WELLS AT NORTHWEST CORNER OF PROPERTY

Well Number	Sample Date	Screened Interval (Feet)	Concentrations (µg/l)													
			Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	1,2-DCA	Ethylene Dibromide	1,3,5-TMB	1,2,4-TMB	2-Methylnaphthalene	Naphthalene	Dissolved Lead	Dissolved Oxygen	
MW-4	11/12/97	915.2 - 920.2	22	1.9	<1	<3	<50	NS	NS	NS	NS	<5	<5	<3	400	
	3/17/98		17	<1	<1	<3	<50	NS	NS	NS	NS	<5	<5	<3	2,200	
	6/23/98		10	<1	<1	<3	<50	<1	<1	<1	<1	7.0	<5	NS	1,600	
	9/25/98		8.5	<1	<1	<3	<50	<1	<1	<1	<1	<5	<5	<3	800	
	12/29/98		13	1.2	<1	<3	<50	<1	<1	<1	<1	<5	<5	3.4	200	
	3/23/99		<1	<1	<1	<3	<50	<1	<1	<1	<1	<5	<5	5.9	2,800	
	6/11/99		<1	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3	1,000	
	9/14/99		<1	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3	400	
MW-13	3/17/98	912.8 - 916.8	48	2.2	75	190	<50	NS	NS	NS	NS	24	52	<3	<200	
	6/23/98		50	<5	65	170	<250	<5	<5	15	350	36	50	NS	<200	
	9/25/98		25	<1	23	57	<50	<1	<1	9.5	160	<5	28	<3	<200	
	12/29/98		20	<1	12	33	<50	<1	<1	5.6	56	<5	11	3.2	400	
	3/23/99		17	<1	5.0	18	<50	<1	<1	2.3	46	<5	<5	<3	<200	
	6/11/99		20	<1	4.7	9.3	<5	<1	<1	1.3	35	<5	<5	<3	<200	
	9/14/99		14	<1	3.0	6.0	<5	<1	<1	1.7	6.2	<5	<5	<3	<200	
	3/17/98		1.0	<1	<1	3.7	<50	NS	NS	NS	NS	<5	<5	3.1	1,800	
MW-14	6/23/98	914.4 - 918.4	3.4	<1	<1	<3	<50	<1	<1	3.1	5.0	7.7	<5	NS	<200	
	9/25/98		7.4	<1	<1	<3	<50	<1	<1	1.9	4.0	<5	<5	<3	<200	
	12/29/98		4.8	<1	<1	<3	<50	<1	<1	1.7	2.3	<5	<5	<3	800	
	3/23/99		<1	<1	<1	<3	<50	<1	<1	2.4	<1	<5	<5	<3	2,200	
	6/11/99		1.3	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3	600	
	9/14/99		4.8	<1	<1	<3	<5	<1	<1	<1	<1	<5	<5	<3	200	
	Groundwater/Surface Water Interface Criteria			200	140	18	35	730	360	NA	ID	ID	ID	13	190 ⁽¹⁾	

NS - Parameter not sampled or not analyzed.

1 - Non-drinking surface water value, must also calculate a final chronic value dependent on receiving water hardness.

NA - Not applicable.
ID - Insufficient data.

MacKenzie for the three wells at the northwest corner of the property. These analytical results demonstrate that the level of impact leaving the site in the groundwater is minor. Of particular concern, since MacKenzie Environmental took over this project, are the concentrations that were in the groundwater at MW-13. The quarterly groundwater analytical laboratory results show a continuing decline in the concentrations of the gasoline-related compounds in samples from MW-13.

From March 1998 to September 1999, the concentration of fuel parameters in samples from MW-13 decreased 94 percent. Samples from MW-4 have shown a decrease in all analytes to non-detectable levels. Sample results from MW-14 have shown low concentrations decreasing to non-detectable levels. However, benzene was reported in the sample from September 14, 1999 to have increased slightly again. This may be due to slight changes in the groundwater flow pattern due to the very low surface water during this period. Appendix C contains graphs that show the decline in benzene and total BTEX concentrations at each of these three wells.

The concentrations of the gasoline-related analytes in the groundwater at the north and west property lines are compared to the groundwater-surface water interface values adopted by the MDEQ and shown on Table 3. These groundwater analytical data have met the groundwater-surface water interface values for the past four quarterly sampling periods.

DISCUSSION

Soil Samples

Tables 4 and 5 summarize the laboratory analyses for organic compounds on soil samples collected by MacKenzie during drilling operations in November 1997 and March 1998. These analyses represent the concentrations of fuel indicator parameters in the soil at the time of these borings and were reported in the *Final Assessment Report*. Figure 12 summarizes the sample results from the laboratory analyses performed on the soils collected during the MacKenzie site activities in November 1997 and March 1998. The laboratory reports were provided in the appendix of the *Final Assessment Report*.

Table 6 provides the laboratory results of the total lead and total organic carbon analyses of the soil samples. The glacial till throughout the site had a dark-gray color, even in non-impacted areas. The total organic carbon analyses demonstrates that the till contains a relatively high percentage of natural organic carbon. This could be related to the proximity to the Grand River or the source material of the till. Even the silt and sand materials contained a higher percentage of organic carbon than typical deposits. It should be noted that the underlying shale and siltstone is dark gray, possibly indicating that it also contains abundant organic carbon. The glacial till is likely derived from this bedrock.

At the time that the *Final Assessment Report*, including the Corrective Action Plan, was submitted to the MDEQ on May 7, 1998, the accepted generic soil saturation concentration for xylene was 400,000 µg/kg. The MDEQ revised certain variables in the soil saturation calculation (including

TABLE 4

SUMMARY OF BTEX COMPOUNDS IN VERIFICATION SOIL SAMPLES

Sample Location	Sample Depth (Feet)	Sample Date	Concentrations (µg/kg)					
			Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE
VSR-1	4 - 6	11/18/97	<10	12	<10	52	64	<100
VSR-2	2 - 4	11/18/97	<10	<10	<10	<30	ND	<100
	6 - 8	11/18/97	830	64	6,300	34,000	41,194	230
VSR-3	6 - 8	11/18/97	310	1,600	3,100	18,000	23,010	580
	8 - 10	11/18/97	690	1,200	1,900	16,000	19,790	670
VSR-4	2 - 4	11/18/97	14	<10	22	110	146	<100
	6 - 8	11/18/97	1,900	3,500	6,800	9,100	21,300	2,400
VSR-5	4 - 6	11/18/97	<10	<10	<10	<30	ND	<100
	6 - 8	11/18/97	43	25	<10	190	258	<100
VSR-6	8 - 10	11/18/97	<10	<10	<10	<30	ND	<100
	11.5 - 12	11/18/97	<10	<10	<10	<30	ND	<100
VSR-7	4 - 5.8	11/18/97	21	<10	<10	140	161	<100
	8 - 9.8	11/18/97	16,000	41,000	20,000	97,000	174,000	4,900
VSR-8	6 - 8	11/19/97	890	2,500	6,600	40,000	49,990	3,000
	8 - 10	11/19/97	5,200	10,000	21,000	160,000	196,200	7,800
VSR-9	4 - 6	11/19/97	<71	<71	<71	<210	ND	<100
VSR-10	2 - 4	11/19/97	<10	<10	<10	<30	ND	<100
	6 - 7.9	11/19/97	2,400	6,100	4,600	27,000	40,100	1,600
VSR-11	5.1 - 6	11/19/97	<75	<75	<75	<220	ND	<100
	9.4 - 10	11/19/97	19	<10	<10	<30	19	<100
VSR-12	6.3 - 7.9	11/19/97	<65	340	550	290	1,180	<100
VSR-13	6 - 8	11/19/97	<10	<10	<10	<30	ND	<100
VSR-14	4 - 6	11/19/97	<10	<10	<10	<30	ND	<100
	8 - 9.6	11/19/97	130	<61	<61	<180	130	250
VSR-15	5.5 - 6.0	3/3/98	66	4,000	36,000	170,000	210,066	NA
Industrial Volatilization to Indoor Air			8,400	C_{LH}	C_{sat}	C_{LH}		C_{LH}
Industrial Vol. to Ambient Air			230,000	3.6×10^7	3.0×10^7	1.3×10^8		8.9×10^7
Industrial Direct Contact			C_{sat}	C_{sat}	C_{sat}	C_{sat}		C_{LH}
Protective of Groundwater			180,000	1.1×10^7	3.4×10^6	3.7×10^6		3.4×10^7
Soil Saturation (C_{sat})			400,000	250,000	140,000	$1,063,000^1$		6.0×10^6

ND - None detected.

NA - Compound not analyzed.

1 - Calculated site-specific value.

TABLE 5

SUMMARY OF POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS IN VERIFICATION SOIL SAMPLES

Sample Location	Sample Interval (Feet)	Concentrations (µg/kg)																
		Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (ghi) perylene	Benzo (a) pyrene	Chrysene	Dibenz (ah) anthracene	Fluoranthene	Fluorene	Indeno (123-cd) pyrene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
VSR-1	4 - 6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-2	2 - 4	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-3	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,700	2,400	<330
	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	710	<330
VSR-4	8 - 10	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	1,500	2,000	<330
	2 - 4	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-5	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,800	4,400	<330
	4 - 6	<330	<330	1,100	2,500	3,300	900	710	1,900	2,400	<330	8,700	<330	820	<330	<330	3,400	5,900
VSR-6	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	8 - 10	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-7	11.5 - 12	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	4 - 5.8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-8	8 - 9.8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,200	6,300	<330
	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,600	9,900	<330
VSR-9	8 - 10	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	10,000	13,000	<330
	4 - 6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-10	2 - 4	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	6 - 7.9	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	1,200	3,400	<330
VSR-11	5.1 - 6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
	9.4 - 10	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	390	<330
VSR-12	6.3 - 7.9	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-13	6 - 8	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
VSR-14	4 - 6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	580	<330	<330	<330	<330	460	490
	8 - 9.6	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330
Vol. to Indoor Air		3.5x10 ⁸	3.0x10 ⁶	1.0x10 ⁸	NLV	ID	NLV	NLV	NLV	ID	NLV	1.0x10 ⁹	1.0x10 ⁹	NLV	ID	7.8x10 ⁷	2.8x10 ⁷	1.0x10 ⁹
Vol. to Ambient Air		9.7x10 ⁷	2.7x10 ⁶	1.6x10 ⁸	NLV	ID	NLV	NLV	NLV	ID	NLV	8.8x10 ⁸	1.5x10 ⁸	NLV	ID	5.9x10 ⁷	740,000	6.7x10 ⁸
Protective of GW		960,000	ID	41,000	NLL	NLL	NLL	NLL	NLL	NLL	NLL	720,000	890,000	NLL	ID	2.0x10 ⁶	450,000	470,000
Direct Contact		8.1x10 ⁸	1.6x10 ⁷	1.9x10 ⁸	210,000	210,000	2.1x10 ⁶	1.6x10 ⁷	21,000	2.1x10 ⁷	21,000	5.4x10 ⁸	5.4x10 ⁸	210,000	1.6x10 ⁸	1.6x10 ⁸	1.6x10 ⁷	3.4x10 ⁸

NLV - Not likely to volatilize. NLL - Not likely to leach.

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ID - Insufficient data.

TABLE 6

LEAD AND ORGANIC CARBON IN VERIFICATION SOIL SAMPLES

Sample Location	Sample Depth (Feet)	Sample Date	Soil Matrix	Concentrations (mg/kg)	
				Total Lead	Total Organic Carbon
VSR-1	4 - 6	11/18/97	Silt and Sand	2.9	<1,400
VSR-2	2 - 4	11/18/97	Silt and Sand	15	6,400
	6 - 8	11/18/97	Silt and Clay	14	13,000
VSR-3	6 - 8	11/18/97	Silt and Sand	21	29,000
	8 - 10	11/18/97	Clay and Silt	31	6,600
VSR-4	2 - 4	11/18/97	Silt and Sand	16	4,000
	6 - 8	11/18/97	Silt and Clay	23	24,000
VSR-5	4 - 6	11/18/97	Silt and Sand	58	25,000
	6 - 8	11/18/97	Clay	19	13,000
VSR-6	8 - 10	11/18/97	Silt and Sand	9.0	2,800
	11.5 - 12	11/18/97	Clay and Silt	20	12,000
VSR-7	4 - 5.8	11/18/97	Clay and Silt	39	26,000
	8 - 9.8	11/18/97	Clay and Silt	24	20,000
VSR-8	6 - 8	11/19/97	Clay and Silt	16	53,000
	8 - 10	11/19/97	Clay and Silt	20	24,000
VSR-9	4 - 6	11/19/97	Silt	17	29,000
VSR-10	2 - 4	11/19/97	Clay and Silt	31	7,300
	6 - 7.9	11/19/97	Clay and Silt	43	52,000
VSR-11	5.1 - 6	11/19/97	Clay and Silt	9.9	36,000
	9.4 - 10	11/19/97	Clay and Silt	14	15,000
VSR-12	6.3 - 7.9	11/19/97	Clay and Silt	17	11,000
VSR-13	6 - 8	11/19/97	Clay and Silt	27	24,000
VSR-14	4 - 6	11/19/97	Clay and Silt	54	22,000
	8 - 9.6	11/19/97	Clay and Silt	17	18,000
Average for Silt and Sand				19.5	14,878
Average for Clay and Silt				25.5	22,660

reducing the fraction of organic carbon from 0.6 percent to 0.2 percent) and published new generic values in Operational Memorandum No. 4, Revision 3, Attachment 2 on June 12, 1998. The revised generic soil saturation value for xylene was then 150,000 µg/kg.

In review of the soil analytical data generated from the boring program conducted for the *Final Assessment Report* and summarized in Table 4 of this report, two soil samples (VSR-8 at 8-10' and VSR-15 at 5.5-6.0') are shown to contain xylenes at concentrations which exceed the revised generic soil saturation value. No other concentrations exceed any generic soil saturation values. MDEQ policy accepts the cleanup goals stated in Corrective Action Plans submitted prior to changes in criteria. This is the case for this site; the *Final Assessment Report* was submitted prior to the change in the cleanup criteria.

In any respect, the MDEQ also allows calculation of site-specific soil saturation values based on data obtained from the subject site (Attachment 6 of Operational Memorandum No. 4, June 12, 1998). Variables in the calculation can be based on data developed from the site and not on averages or assumptions that are used to calculate the published generic values.

The average total organic carbon content of the soils at the site were determined from non-impacted samples. Four soil samples of both the silt and sand unit and the clay and silt glacial till showed no detectable concentrations of fuel-related parameters. The concentrations of total organic carbon in these samples were averaged for both soil types. These averages were then incorporated into site-specific calculations of soil saturation for xylenes for the two soil types. These calculations are provided in Appendix D of this report. The site-specific value for xylene for the silt and sand unit is calculated to be 1,063,000 µg/kg, and the value for the glacial till is 1,329,000 µg/kg.

The concentrations of xylenes reported in the soil samples do not approach these calculated numbers.

The concentrations of many organic fuel compounds reported in the soils exceed unrestricted levels, as does lead at several locations. The reported concentrations do, however, satisfy industrial direct contact risk-based screening levels and, therefore, meet the requirements for a restricted closure. Soil impact has not migrated off site.

Groundwater Samples

As stated in the Geology and Hydrogeology section, the shallow groundwater is non-potable. Therefore, the nearest potential receptor to the site is the Grand River. Cleanup initiatives must demonstrate that the surface water resource is not negatively affected. Groundwater travel distance from the north property line to the Grand River is about 110 feet, with a travel time of one and a half to two years. Fate and transport modeling of the groundwater plume presented in the *Final Assessment Report* was used to predict plume movement towards the river. The modeling estimates that the fuel components present in March 1998 would virtually attenuate before mixing with the surface water. The modeling did not project the increase in dissolved oxygen that is available in the groundwater-surface water mixing zone which would greatly assist biodegradation. Additionally, concentrations of dissolved fuel components have decreased 94 percent at MW-13. Modeling of the

concentrations today at the north property line would show complete degradation before reaching the river.

Quarterly groundwater sampling by MacKenzie has demonstrated that dissolved concentrations of fuel in the groundwater near the northwest corner of the property have decreased dramatically and are trending lower. These data support a shrinking plume and a leading edge that is receding. For the past four quarterly sampling events, the groundwater at the three sentinel wells at the property line have had concentrations of gasoline-related parameters below their respective groundwater-surface water criterion. Therefore, the Grand River is not at risk.

Since the groundwater leaving the site satisfies the surface water protection requirements, there is no need for off-site restrictions. Site restrictions are required for the subject property to preclude possible human exposure and physical off-site transport of the shallow groundwater.

SITE RESTRICTIONS

A *Restrictive Covenant* was prepared outlining the area of the parking lot in the northwest corner of the property as having use restrictions. A legal description of this area accompanies the *Restrictive Covenant*. The soil and groundwater under this portion of the property is limited from off-site transport and disposal without proper characterization to determine disposition requirements. The *Restrictive Covenant* was recorded with the Register of Deeds along with a *Corrective Action Notice to the Register of Deeds*. The *Corrective Action Notice to the Register of Deeds* document simply provides notification that the site is zoned industrial and can not be changed to residential land use.

A *Notice to Local Unit of Government of Land Use Restrictions* document was also prepared. Copies of this document were provided to the City of Jackson and to the Jackson County Health Department.

Copies all of these documents are provided in Appendix E. The *Restrictive Covenant* and *Corrective Action Notice to the Register of Deeds* show the recorded Liber and page numbers for the documents. The notice to City of Jackson was stamped signifying receipt. The notice to the County Health Department was also stamped.

CONCLUSIONS

A release or releases from underground storage tanks at the site have resulted in the impact of both soil and shallow non-potable groundwater. Remedial efforts were conducted by Envirologic through the mid-1990s. MacKenzie Environmental took over the Qualified Consultant responsibilities for the site in October 1997 and conducted soil and groundwater sampling to determine the level of impact remaining. Of specific concern was the close proximity of the site to the Grand River. Although the Grand River is not used as a potable water source, it is the nearest sensitive receptor for the groundwater impact.

The concentrations of fuel constituents reported by the laboratory for both soil and groundwater samples were compared to risk-based screening levels. The comparison showed that impact under the northwest corner of the subject property contains residual fuel compounds in excess of generic unrestricted residential criteria for both soil and groundwater. The extent of the impact has been identified and mapped. Groundwater modeling was conducted to evaluate the fate of the groundwater plume once it migrated off site. It was determined that the concentrations of fuel constituents reaching the river would not be of consequence, if in fact they reached the river at all.

MacKenzie then installed ORC® socks in wells within and adjacent to the groundwater plume to accelerate the natural biodegradation of the fuel compounds. The goal was to help reduce the concentrations within the center of the plume, shrink the plume size, and reduce the potential of impact migrating off site in the direction of the river. By reducing the plume concentrations and size, natural biodegradation of the remaining fuel components will become more effective at controlling and attenuating the plume.

Off-site migration of the impact is limited to minor dissolved components in the groundwater. Groundwater monitor wells at the northwest corner of the property have been sampled on a quarterly basis since March 1998. The results of this groundwater sampling has demonstrated that the concentrations of the fuel parameters migrating off site have decreased 94 percent in 18 months and that the leading edge of the plume is regressing. The concentrations of fuel constituents in the groundwater sampled for the past four quarters from the monitor wells located at the northwest corner of the property have met unrestricted residential criteria. Therefore, requirements for closure of the groundwater issue for adjacent properties have been fulfilled following the guideline presented in MDEQ Storage Tank Division Operational Memorandum No. 9, dated November 6, 1996.

With the lack of free product now at the subject property, the site is no longer given a Class 1 designation. The site now meets the prescribed scenario of a Class 4 site.

The impacted area of the subject property can be closed under restricted industrial criteria following a Tier II evaluation. A *Restrictive Covenant* for the impacted area of the subject property and a *Corrective Action Notice to Register of Deeds* have been drafted and recorded with the Jackson County Register of Deeds. Notices to the City of Jackson and the Jackson County Health Department have been issued. This LUST site is now recommended for closure under Part 213 of Act 451 of the Public Acts of 1994, as amended.



Mindy Reilly - Jackson Co.

REST

2135998

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11/04/1999 09:07A

L-1616 P-623

RESTRICTIVE COVENANT

The below listed owner/operator has implemented a corrective action plan requiring institutional controls in the form of a restrictive covenant. The corrective action plan was developed as a result of a release from a Leaking Underground Storage Tank(s) (LUST) and was prepared pursuant to the provisions in Section 21310a(2) of Part 213. Regulated substances were discovered during the investigation and/or removal of Underground Storage Tanks (USTs). The corrective action plan cited above will be maintained on file at the STD District Office located at

301 E. Louis Glick Hwy., Jackson, Michigan.

This restrictive covenant is filed with the County Register of Deeds and covers the land identified in the following, and more fully described in Attachment A. This restrictive covenant defines the areas addressed by the corrective action plan and the scope of any land use or resources limitations. The survey defining the areas addressed by the corrective action plan is shown in Attachment B. Restrictions to the land described in Attachment A and shown in Attachment B are as follows:

The northwest portion of the property contains fuel-impacted soil at levels that exceed unrestricted land use. The site meets the requirements for closure under industrial direct contact criteria adopted by the Michigan Department of Environmental Quality. To satisfy the requirements for closure, the subject portion of the property can not be rezoned as residential unless additional investigation demonstrates that the site meets residential criteria.

Additionally, the soil underlying the are of restriction must remain in place or must be characterized through sample collection and analysis prior to removal to determine handling and disposition requirements for the soil. If excavation work is to be preformed in the restricted area, an environmental consultant or other qualified person should be present to supervise and direct soil handling and its disposition. Groundwater within 20 feet of the surface in the area of restriction is not to be exploited as a useable resource. Groundwater may be extracted, but must be characterized, treated if necessary, and appropriately disposed. Health and safety precautions are to be followed when exposure to the impacted soil and groundwater is anticipated. Due to elevated concentrations of some fuel components, no buildings are allowed to be constructed in the restricted area unless consideration is given to volatilization of fuel components from the soil to indoor air.

The restrictive covenant is being filed by the below listed legal titleholder or with the express written permission of the legal titleholder. *(Attach permission statement from the legal titleholder if he/she is not signing this document.)*

Owner/Operator implementing the corrective action plan:
Daniel L. Jacob & Company, Inc. (DBA Jack Smith Beverages)

Release Date(s): November 5, 1990 and July 1, 1994

County where deed is registered: Jackson

Common description of land, township/city, County: 546 North Mechanic Street, Jackson, Michigan

Now Therefore (Legal Titleholder Name and Address)

Daniel L. Jacob & Company, Inc., 2403 East High Street, Jackson, Michigan 49203,
(hereinafter referred to as the "titleholder"); hereby imposes restriction on the property and covenants and agrees that:

1. The Titleholder shall restrict activities on the property that may interfere with corrective action, operation and maintenance, monitoring, or other measures necessary to assure the effectiveness and integrity of the corrective action.
2. The Titleholder shall restrict activities that may result in exposure to regulated substances above levels established in the corrective action plan.
3. The Titleholder shall prevent a conveyance of title, an easement, or any other interest in the property from being consummated without adequate and complete provision for compliance with the corrective action plan and prevention of exposure to regulated substances described in item 2 above.
4. The Titleholder shall grant to the Department of Environmental Quality (Department) and its designated representatives the right to enter the property at reasonable times for the purpose of determining and monitoring compliance with the corrective action plan, including but not limited to the right to take samples, inspect the operation of the corrective action measures, and inspect records.
5. Soil shall not be removed from the property described herein, unless it is characterized to determine if it can be relocated without posing a threat to the public health, safety, welfare or environment in the new location.
6. The state may enforce the restrictions set forth in the covenant by legal action in a court of appropriate jurisdiction.

The restrictions and other requirements described in this Restrictive Covenant shall run with the land and be binding to the titleholder's successors, assigns, and lessees or their authorized agents, employees or persons acting under their direction or control. The restrictions shall apply until the Department determines that regulated substances no longer present an unacceptable risk to the public health, safety or welfare or to the environment. A copy of this Restrictive Covenant shall be provided to all heirs, successors, assigns, and transferees.

This Restrictive Covenant shall not be amended, modified or terminated except by a written instrument executed by and between the Titleholder at the time of the proposed amendment, modification, or termination, and the Department. Within five (5) days of executing an amendment, modification or termination of the Restrictive Covenant, the Titleholder shall record such amendment, modification or termination with the County Register of Deeds, previously named, and within five (5) days thereafter, the Titleholder shall provide a true copy of the recorded amendment, modification or termination to the Department.

If any provision of this Restrictive Covenant is also the subject of any laws or regulations established by any federal, state or local government, the stricter of the two standards shall prevail.

The undersigned person, if executing this Restrictive Covenant on behalf of the Titleholder, represents and certifies that they are duly authorized and have been fully empowered to execute and deliver this Restrictive Covenant.

I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified in any way.


Legal Titleholder or Authorized Representative's Signature

10-21-99
Date

DANIEL L. JACOB
Print Legal Titleholder or Authorized Representative's Name



Mindy Reilly - Jackson Co.

REST

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Signed in Jackson County, Michigan

IN WITNESS WHEREOF, the said Titleholder of the above described property has caused the Restrictive Covenant to be executed on the 21 day of OCTOBER, 1999.
(month) (year)

Signed in the presence of:

[Signature]
Witness

LARRY O. DUNN
Print Witness' Name*

Barbara E. Winn
Witness

Barbara E. Winn
Print Witness' Name*

* The notary shall not also serve as a witness.

The foregoing instrument was acknowledged before me this 21st day of October, 1999.
(month) (year)
by Daniel L. Jacob

[Signature] Notary Public,
Linda S. Wright-Miers

Jackson County, Michigan
(Insert County) (Insert State)

My Commission Expires: 12-28-03

Drafted by:

Mackenzie Environmental Services, Inc.

Hugh G. Heuvelhorst

4248 West Saginaw Highway

Grand Ledge, Michigan 48837



Mindy Reilly - Jackson Co.

REST

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Mindy Reilly - Jackson Co.

REST

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11/04/1999 09:07A

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ATTACHMENT A

Attached and made part of that certain Restrictive Covenant for Daniel L. Jacob & Company, Inc.

LEGAL PROPERTY DESCRIPTION OF AREA ADDRESSED BY THE RESTRICTIVE COVENANT

Township 2 South - Range 1 West

Section 34

Commencing at the Southwest corner of Ganson and North Mechanic Streets; THENCE Westerly along the South line of Ganson Street 166 feet to the Point of Beginning; THENCE Southerly and parallel to the west line of North Mechanic Street 118 feet; THENCE Westerly and parallel to the south line of Ganson Street 78 feet; THENCE Northerly along the East line of the right of way of the Penn Central Railroad 118.83 feet to the south line of Ganson Street; THENCE Easterly along the south line of Ganson Street 92 feet to the Point of Beginning.

IN THE COUNTY OF JACKSON
STATE OF MICHIGAN



Mindy Reilly - Jackson Co.

REST

ATTACHMENT B

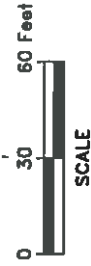
AREA OF
RESTRICTIVE COVENANT

GANSON STREET

546 NORTH MECHANIC

MECHANIC STREET

N



PROPERTY LINE

RESTRICTED AREA

RAILROAD RIGHT OF WAY

PENIN CENTRAL RAILROAD

GRAND RIVER

DANIEL L. JACOB & COMPANY
JACK SMITH BEVERAGES LUST SITE
546 NORTH MECHANIC STREET
JACKSON, MICHIGAN

MacKenzie Environmental Services, Inc.
4248 West Saginaw Highway Grand Ledge, Michigan 4883
Office (517) 627-8408 Fax (517) 627-4470

Project: No. M7-52
Date: October 28, 1999
Drawn by: K. Hayward
Design: RESTRICTED.OWE



Mindy Reilly - Jackson Co.

N

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Page: 1 of 3
11/04/1999 09:07A
L-1616 P-624

CORRECTIVE ACTION NOTICE TO REGISTER OF DEEDS

The owner/operator identified below has prepared a corrective action plan requiring land use controls. The corrective action plan was developed as a result of a release from an underground storage tank(s) and was prepared pursuant to the provision in Section 21310a(1) of NREPA. Regulated substances were discovered during the investigation and/or removal of underground storage tank(s) (USTs). This Notice of Corrective Action is filed with the County Register of Deeds and covers the land identified in the following, and more fully described in Attachment A, attached.

Owner/Operator: Daniel L. Jacob & Company, Inc. (DBA Jack Smith Beverages)

Release Date(s): November 5, 1990 and July 1, 1994

County where deed is registered: Jackson

Common description of land, township/city, County: 546 North Mechanic Street

Jackson, Michigan

* The land use that was the basis of corrective action at this site is as follows:

 Commercial X Industrial

If there is a proposed change in the land use at any time in the future, that change may necessitate further evaluation of potential risks to the public health, safety, and welfare and to the environment. The Department of Environmental Quality shall be contacted regarding any proposed change in the land use.

This notice is being filed by the property owner or with the express written permission of the property owner.

The filing of this notice is consistent with the provisions of Section 21310a(1) of Part 213. The corrective action plan cited above will be maintained on file at the STD District Office located at

301 E. Louis Glick Hwy., Jackson, Michigan

I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified in any way.


Legal Titleholder or Authorized Representative's Signature

10-21-99
Date

DANIEL L. JACOB
Print Legal Titleholder or Authorized Representative's Name

Signed in Jackson County, Michigan

IN WITNESS WHEREOF, the said Owner of the above described property has caused the Institutional Control to be executed on the 21 day of OCTOBER, 1999.
(month) (year)

Larry O. Dunn
Witness

LARRY O. DUNN
Print Witness' Name*

Barbara E. Winn
Witness

BARBARA E. WINN
Print Witness' Name*

* The notary shall not serve as a witness.

The foregoing instrument was acknowledge before me this 21st day of October, 1999.
(month) (year)

by Daniel L. Jacob

Linda S. Wright-Miers Notary Public,
Linda S. Wright-Miers
Jackson County, Michigan
(Insert County) (Insert State)

My Commission Expires: 12-28-03

Drafted by:

Mackenzie Environmental Services, Inc.
Company Name

Hugh G. Heuvelhorst
Print Name of Drafter

4248 West Saginaw Highway
Company Address

Grand Ledge, Michigan 48837



Mindy Reilly - Jackson Co.

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Mindy Reilly - Jackson Co.

N

2135999

Page: 3 of 3

11/04/1999 09:07A

L-1616 P-624

ATTACHMENT A

Attached and made part of that certain Restrictive Covenant for Daniel L. Jacob & Company, Inc.

LEGAL PROPERTY DESCRIPTION OF AREA ADDRESSED BY THE RESTRICTIVE COVENANT

Township 2 South - Range 1 West

Section 34

Commencing at the Southwest corner of Ganson and North Mechanic Streets; THENCE Westerly along the South line of Ganson Street 166 feet to the Point of Beginning; THENCE Southerly and parallel to the west line of North Mechanic Street 118 feet; THENCE Westerly and parallel to the south line of Ganson Street 78 feet; THENCE Northerly along the East line of the right of way of the Penn Central Railroad 118.83 feet to the south line of Ganson Street; THENCE Easterly along the south line of Ganson Street 92 feet to the Point of Beginning.

IN THE COUNTY OF JACKSON
STATE OF MICHIGAN

**NOTICE TO LOCAL UNIT(S) OF GOVERNMENT OF LAND USE RESTRICTIONS**

This information and form is required under Sections 21310a(5) and 21316 of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Failure to comply with the provisions of this Act may result in civil fines not to exceed \$10,000 for each day the violation continues or failure to comply continues.

Instructions: (1) Use this form to provide notice of land use restrictions that are part of the corrective action plan to the Local Unit(s) of Government (LUG). (2) If corrective action is based on the use of institutional controls regarding off-site migration of regulated substances, submit a draft copy of this notification with the corrective action plan and wait for Storage Tank Division (STD) approval before providing notice to the LUG. If the institutional controls are for on-site contamination, the owner/operator may proceed with providing notice to the LUG. (3) Send the notice to the city, village or township clerk. Provide a copy to the County/District Health Department if groundwater exceeds Tier 1 residential criteria. (4) Submit a copy of the notice and proof of providing the notice with the Closure Report (EQP 3843) to the appropriate STD District Office listed on the back of the Closure Report Cover Sheet.

City of Jackson
Name of Local Unit of Government

Jackson County Health Department
Name of Local Unit of Government

Notice to the Local Unit of Government Receiving this Form:

A corrective action plan for the site named below has been developed as a result of a release from an underground storage tank. This form and the attachments are to provide the local unit(s) of government notice of the land use restrictions that are part of the corrective action plan. A copy of the institutional control mechanism(s) in the form of a Corrective Action Notice to Register of Deeds, and/or Restrictive Covenant, and/or alternate mechanism is/are attached. The attached institutional control mechanism(s) describe the land use restrictions and the land where the restrictions apply.

Owner or Operator: Daniel L. Jacob & Company (DBA Jack Smith Beverages)

Site Name: Owen Machine & Tool, Inc.

Site Address: 546 North Mechanic Street City: Jackson State: Michigan Zip: 49203

Contact Person: Mr. Larry O. Dunn Phone Number: 517-782-7191

Mailing Address: 2403 East High Street City: Jackson State: Michigan Zip: 49203

Qualified Underground Storage Tank Consultant: MacKenzie Environmental Services, Inc.

Address: 4248 West Saginaw Highway City: Grand Ledge State: Michigan Zip: 49203

Contact Person: Hugh G. Heuvelhorst Phone Number: 517-627-8408

I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified.


Owner or Operator's Signature

RECEIVED
CITY OF JACKSON

10-21-99
Date

NOV 04 1999

EQP3872 (Rev. 5/98)

CLERK'S OFFICE

By


City Clerk

NOTICE TO LOCAL UNIT(S) OF GOVERNMENT OF LAND USE RESTRICTIONS

This information and form is required under Sections 21310a(5) and 21316 of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Failure to comply with the provisions of this Act may result in civil fines not to exceed \$10,000 for each day the violation continues or failure to comply continues.

Instructions: (1) Use this form to provide notice of land use restrictions that are part of the corrective action plan to the Local Unit(s) of Government (LUG). (2) If corrective action is based on the use of institutional controls regarding off-site migration of regulated substances, submit a draft copy of this notification with the corrective action plan and wait for Storage Tank Division (STD) approval before providing notice to the LUG. If the institutional controls are for on-site contamination, the owner/operator may proceed with providing notice to the LUG. (3) Send the notice to the city, village or township clerk. Provide a copy to the County/District Health Department if groundwater exceeds Tier 1 residential criteria. (4) Submit a copy of the notice and proof of providing the notice with the Closure Report (EQP 3843) to the appropriate STD District Office listed on the back of the Closure Report Cover Sheet.

City of Jackson Jackson County Health Department
Name of Local Unit of Government Name of Local Unit of Government

Notice to the Local Unit of Government Receiving this Form:

A corrective action plan for the site named below has been developed as a result of a release from an underground storage tank. This form and the attachments are to provide the local unit(s) of government notice of the land use restrictions that are part of the corrective action plan. A copy of the institutional control mechanism(s) in the form of a Corrective Action Notice to Register of Deeds, and/or Restrictive Covenant, and/or alternate mechanism is/are attached. The attached institutional control mechanism(s) describe the land use restrictions and the land where the restrictions apply.

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I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified.

[Signature]
Owner or Operator's Signature

10-21-99
Date

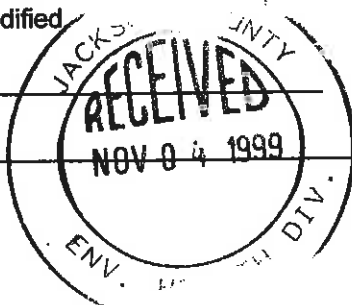
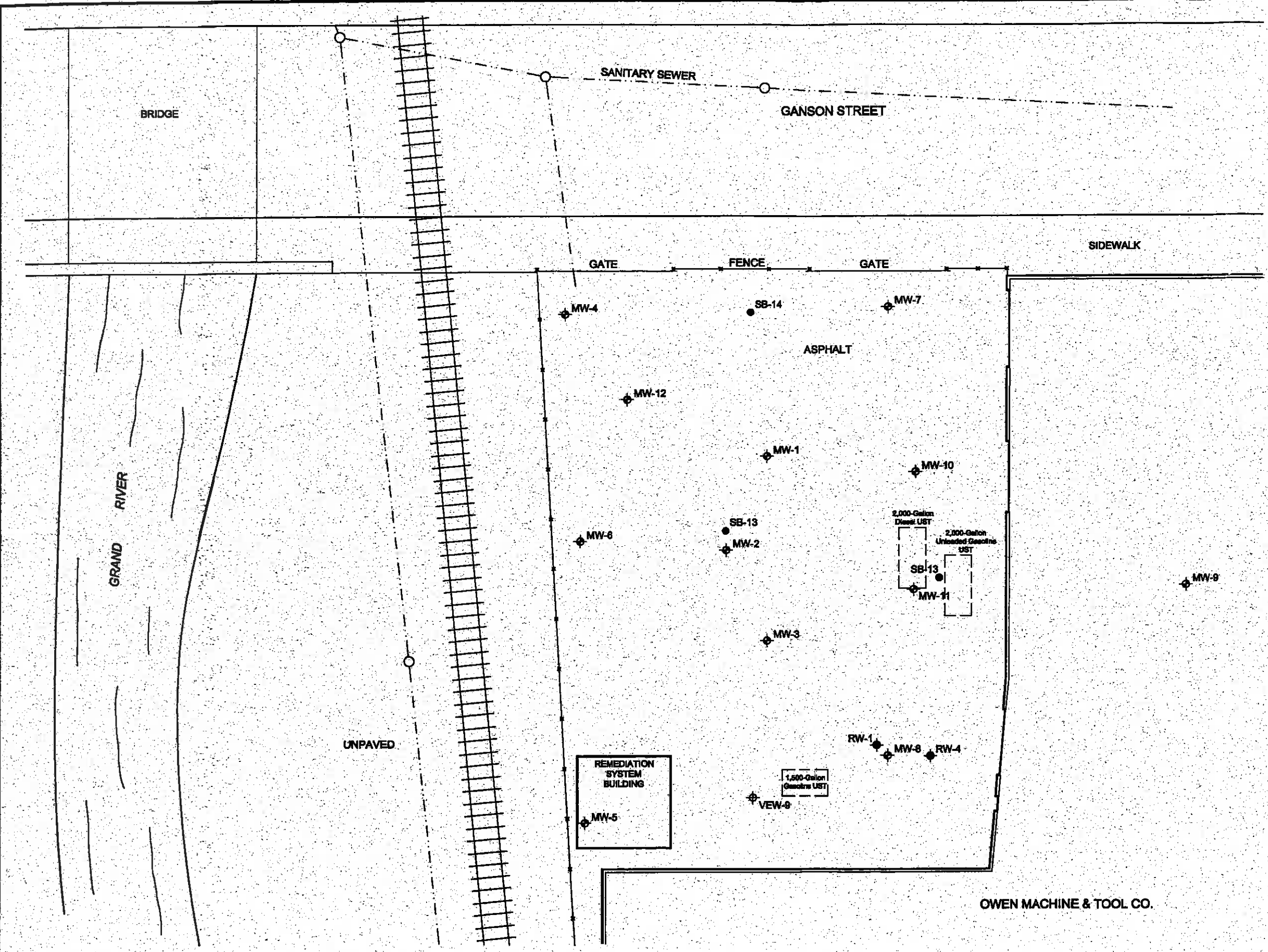


FIGURE 2

SITE FEATURES MAP WITH
WELLS AND BORINGS
DRILLED BY ENVIROLOGIC



LEGEND

- Groundwater Monitor Well
- Soil Boring
- Vapor Extraction Well
- Product Recovery Well



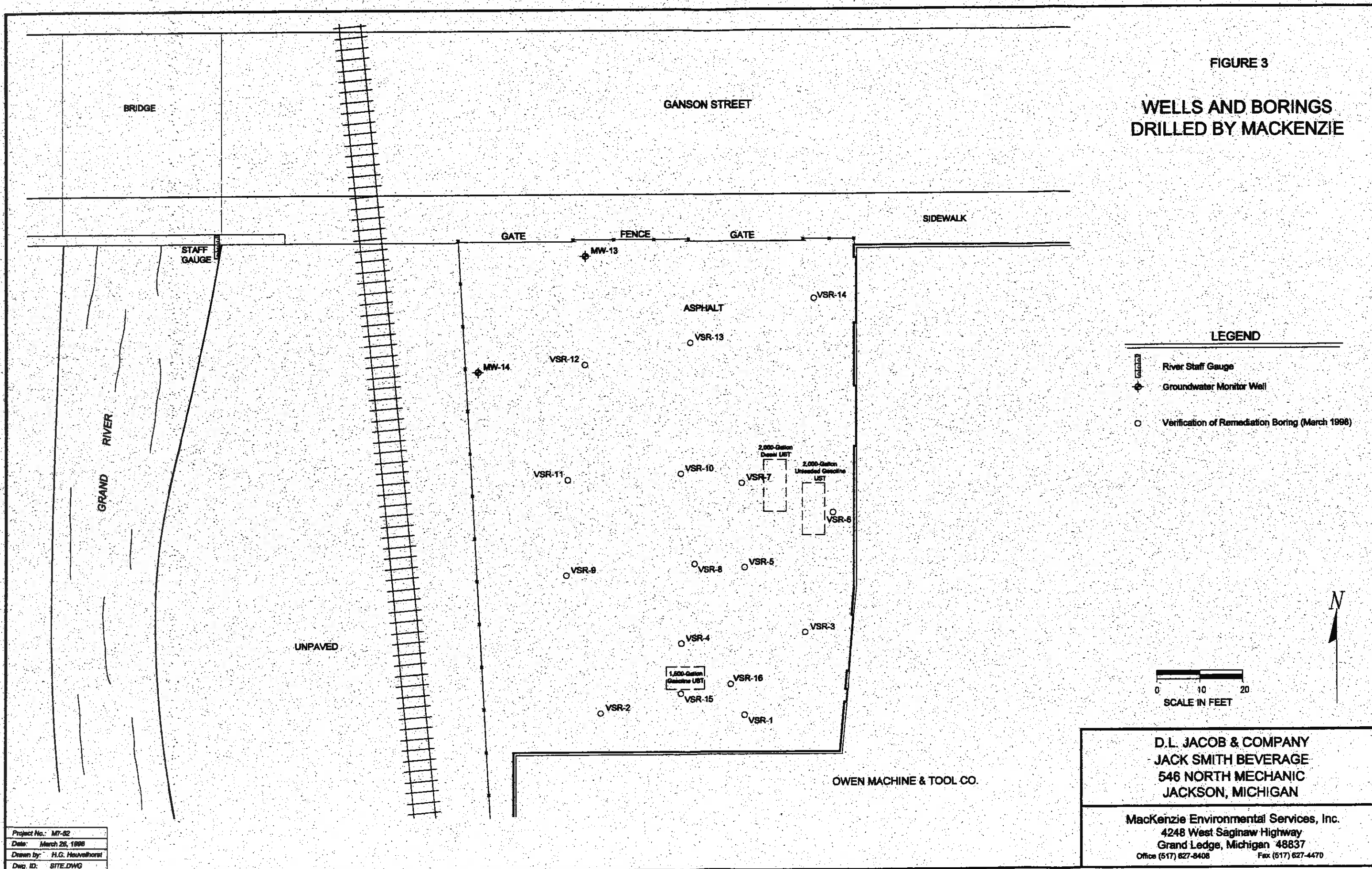
Project No.: M7-02
Date: March 20, 1998
Drawn by: H.G. Heuvelhorst
Dwg. ID: SITE.DWG

D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470

FIGURE 3

WELLS AND BORINGS DRILLED BY MACKENZIE



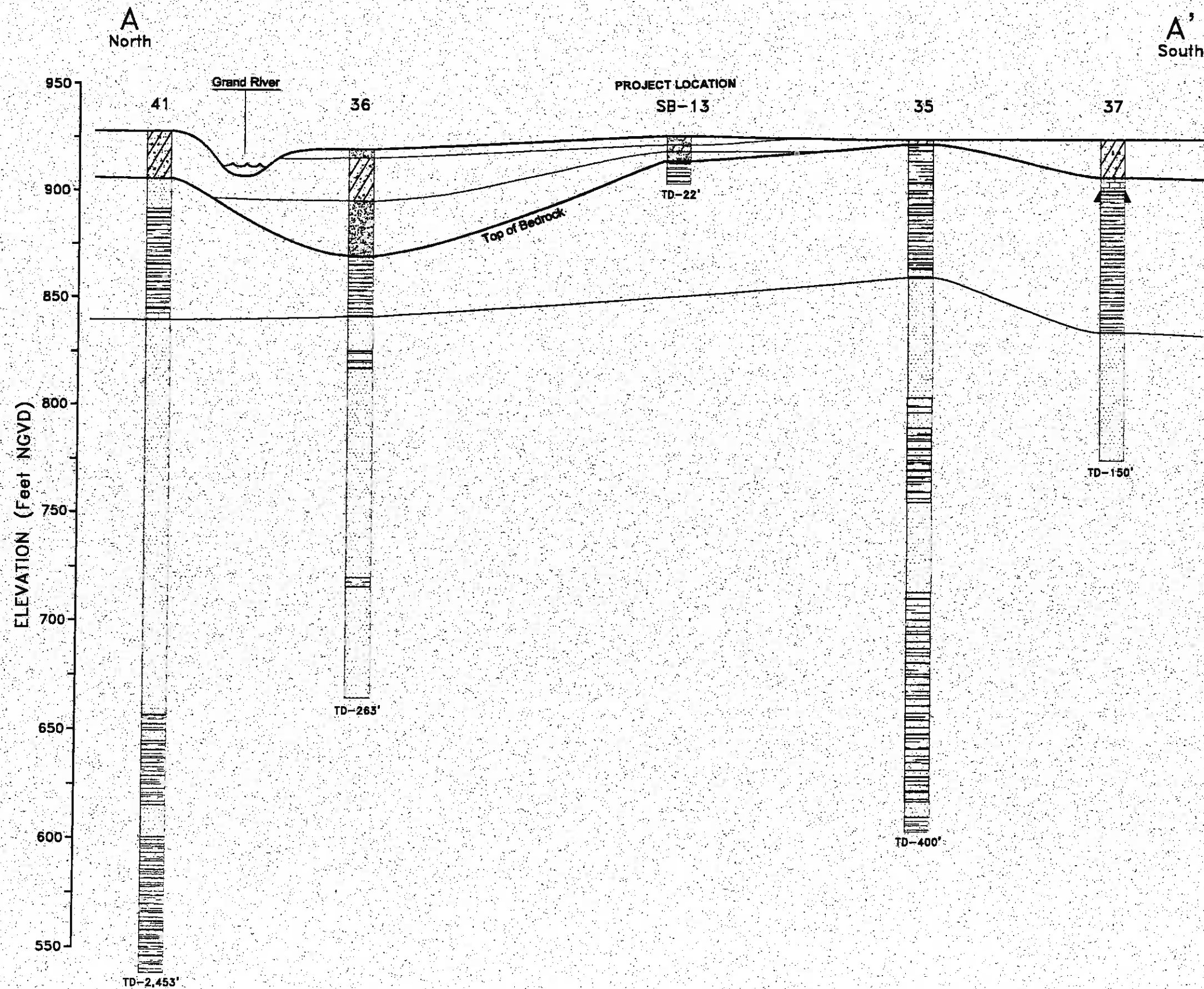
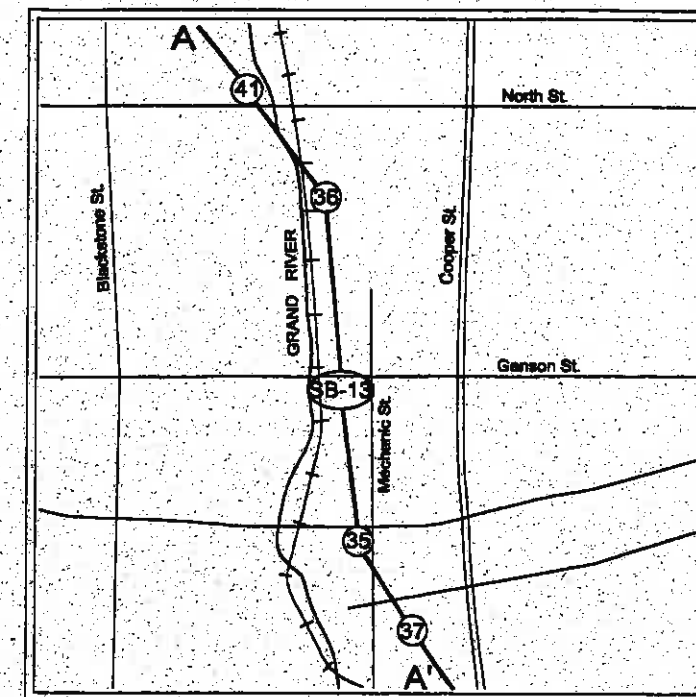


FIGURE 4

REGIONAL CROSS SECTION A-A'



LOCATION OF CROSS SECTION

LEGEND

- Clayey Glacial Till
- Sand or Sand and Gravel
- Sandstone
- Sandstone and Shale
- Shale
- Limestone
- Bottom of Well Casing

Project No.: M7-52
Date: Jan. 27, 1998
Drawn by: H. Heuvelhorst
Dwg. ID: REGIONAA.DWG

Note: The well logs received for wells 35, 36, and 41 were incomplete. The shown portion of the lithologic section represents the portion of the well logs received. Casing depth for wells 35 and 36 were not shown on the logs. Well 41 was drilled for oil and gas and was abandoned.

Horizontal Scale: 1"=400'
Vertical Scale: 1"=50'
Vertical Exaggeration: 8X

D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN



MacKenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470

FIGURE 12
BTEX, PNA, AND TOTAL LEAD
CONCENTRATIONS IN SOIL

November 18 and 19, 1997
and March 3, 1998

Total BTEX (µg/kg)
Total PNAs (µg/kg)
Total Lead (mg/kg)

LEGEND

-  River Staff Gauge
-  Verification of Remediation Boring
- ND Parameter Not Detected
- NA Parameter Not Analyzed

0 10 20
SCALE IN FEET



D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470



Project No.: M7-62
Date: April 16, 1997
Drawn by: H.G. Heuvelhorst
Dwg. ID: SOIL-DATA.DWG

FIGURE 11

DISSOLVED OXYGEN IN GROUNDWATER

June 11, 1999

Concentrations in mg/l

LEGEND

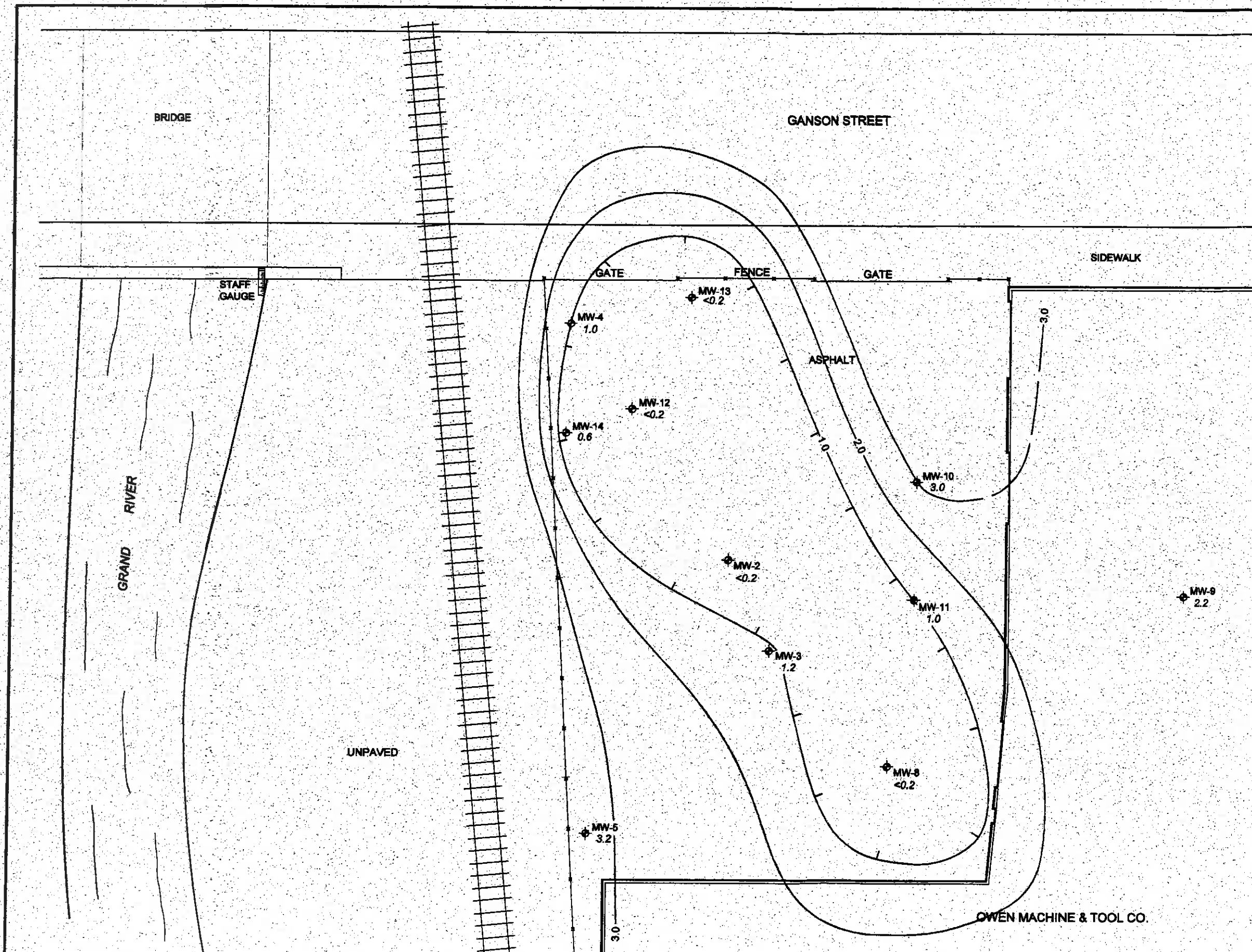
-  River Staff Gauge
-  Groundwater Monitor Well

0 10 20
SCALE IN FEET



D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470





Project No.: M7-52
Date: March 28, 1998
Drawn by: H.G. Heuvelhorst
Dwg. ID: SITE DWG

FIGURE 9
**POTENTIOMETRIC SURFACE
ELEVATION**

June 11, 1999

Contour Interval - 0.2 Foot

LEGEND

-  River Staff Gauge
-  Groundwater Monitor Well

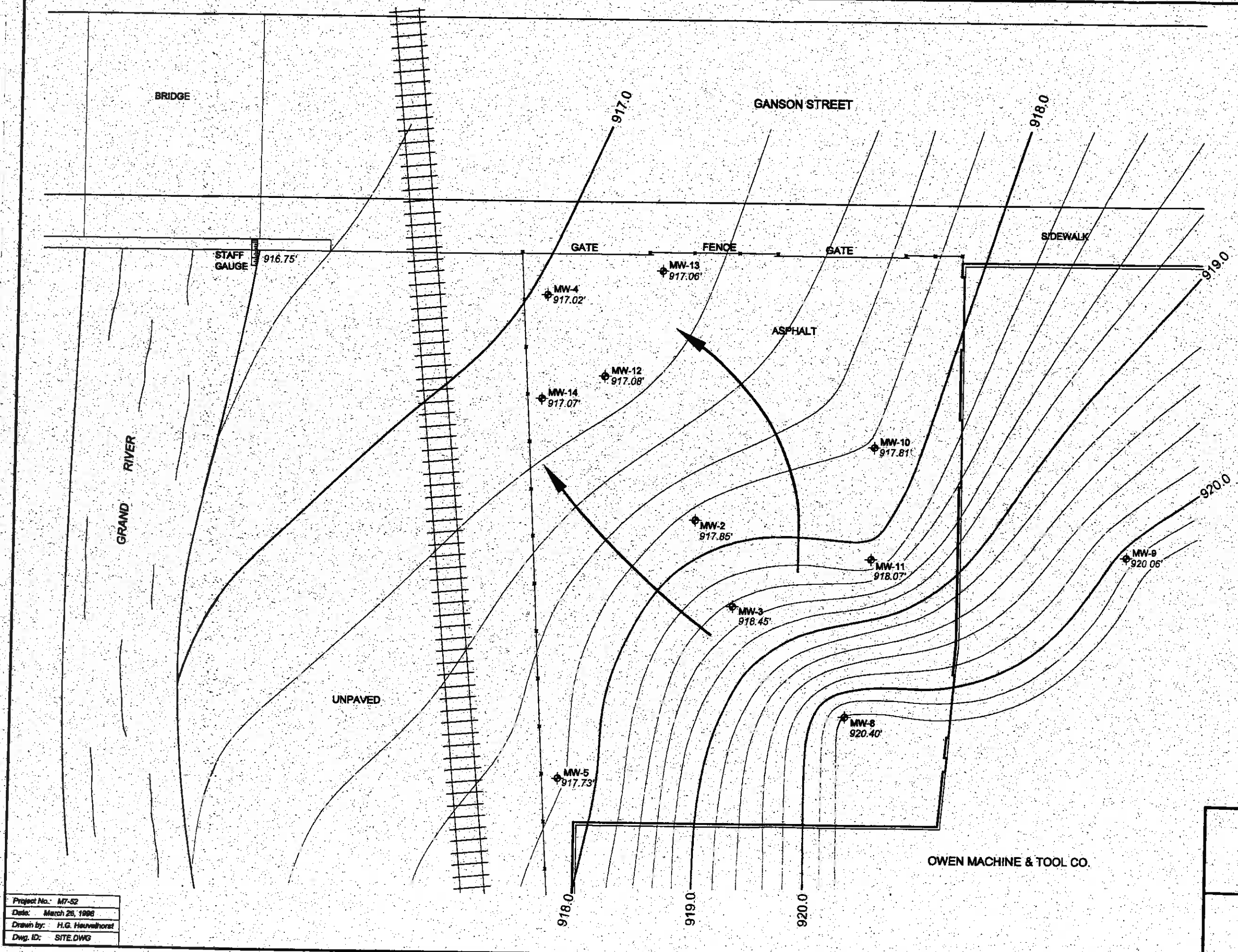
HORIZONTAL HYDRAULIC GRADIENTS

MW-8 to MW-3 - 0.059
MW-2 to MW-4 - 0.015



D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470






Project No.: M7-52
Date: March 26, 1998
Drawn by: H.G. Heuvelhorst
Dwg. ID: SITE.DWG

FIGURE 7
**POTENTIOMETRIC SURFACE
 ELEVATION**

November 26, 1997

Contour Interval - 0.2 Foot

LEGEND

-  River Staff Gauge
-  Groundwater Monitor Well
-  Groundwater Flow Direction

HORIZONTAL HYDRAULIC GRADIENTS

MW-8 to MW-3 - 0.039

MW-2 to MW-4 - 0.012

0 10 20
 SCALE IN FEET



D.L. JACOB & COMPANY
 JACK SMITH BEVERAGE
 546 NORTH MECHANIC
 JACKSON, MICHIGAN

Mackenzie Environmental Services, Inc.
 4248 West Saginaw Highway
 Grand Ledge, Michigan 48837
 Office (517) 627-8406 Fax (517) 627-4470

BRIDGE

GANSON STREET

SIDEWALK

STAFF
 GAUGE
 916.93

GATE

FENCE

GATE

ASPHALT

GRAND
 RIVER

UNPAVED

OWEN MACHINE & TOOL CO.

917.0

918.0

919.0

918.0

919.0

920.0

919.0

MW-4
 917.20

MW-13

MW-12
 917.26

MW-14

MW-10
 917.93

MW-2
 917.88

MW-11
 918.16

MW-9
 919.89

MW-3
 918.42

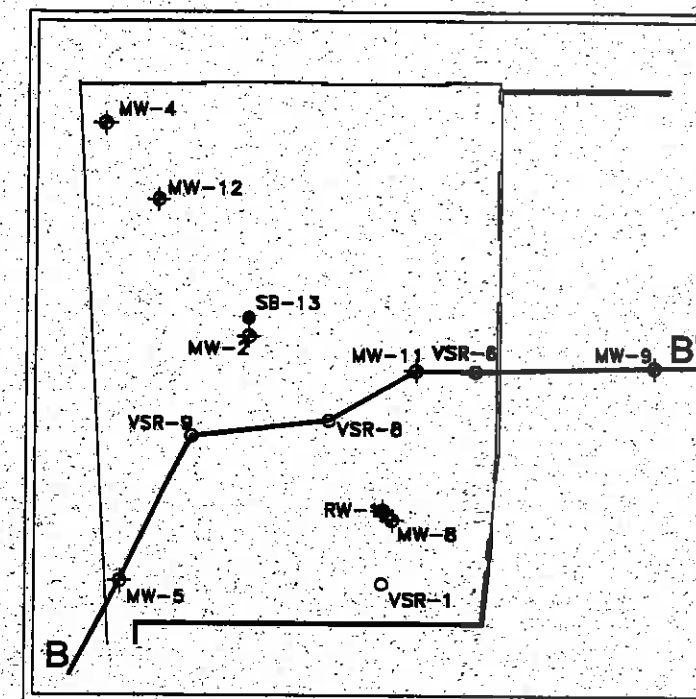
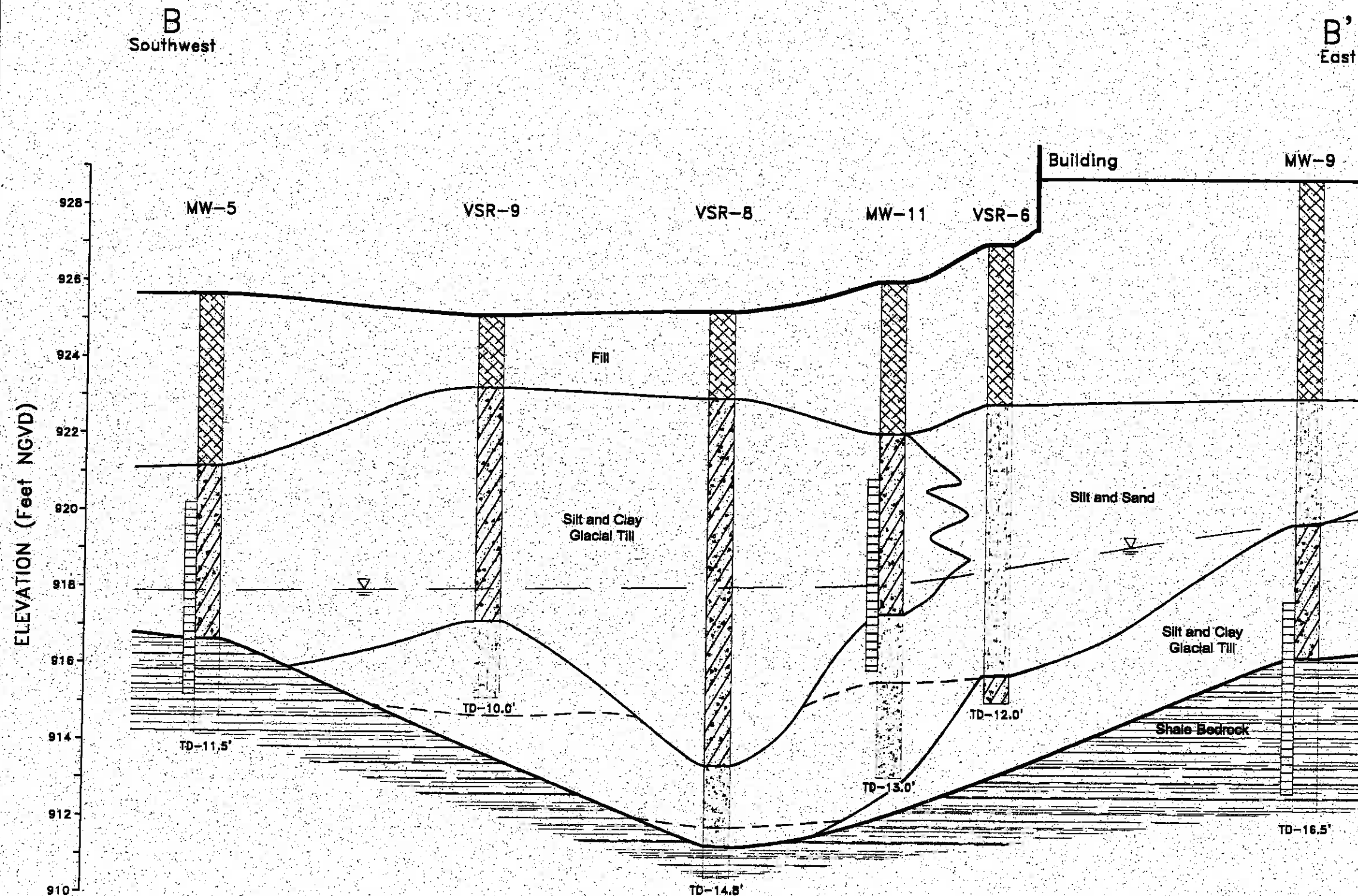
MW-8
 919.72

MW-5
 917.91

Project No. M7-52
 Date: March 26, 1998
 Drawn by: H.G. Heuvelhorst
 Dwg. ID: SITE.DWG

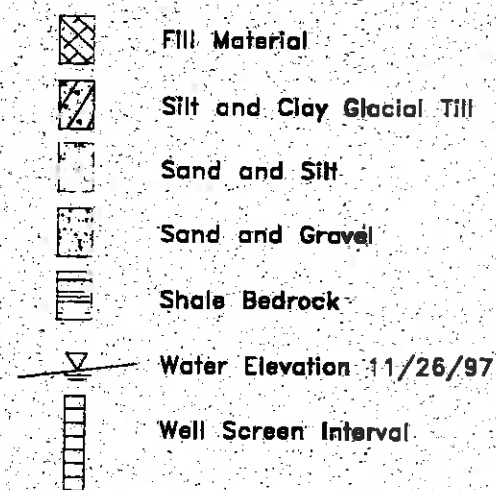
FIGURE 6

SITE CROSS SECTION
B-B'



LOCATION OF CROSS SECTION

LEGEND



Project No.: M7-52
Date: Jan. 14, 1998
Drawn by: H. Heuvelhorst
Dwg. ID: SITE-BB'.DWG

Horizontal Scale: 1"=15'
Vertical Scale: 1"=3'
Vertical Exaggeration: 5X

D.L. JACOB & COMPANY
JACK SMITH BEVERAGE
546 NORTH MECHANIC
JACKSON, MICHIGAN

MacKenzie Environmental Services, Inc.
4248 West Saginaw Highway
Grand Ledge, Michigan 48837
Office (517) 627-8408 Fax (517) 627-4470

Appendix J



Jackson County ADMINISTRATOR/CONTROLLER

Randall W. Treacher, Administrator/Controller

June 24, 2009

Shawn Shadley
ASTI Environmental
660 Cascade West Parkway SE
Suite 210
Grand Rapids, MI 49546

RE: Freedom of Information Act Request

Dear Mr. Shadley:

Please be advised that on the 23rd day of June, 2009 you submitted a FOIA request for the following public record(s):

Any documentation pertaining to environmental concerns (spills, leaks, USTs, etc.) associated with 546 N. Mechanic Street, Jackson, MI or any adjoining properties.

A search has been conducted for the records and it has been determined that they do not exist.

In the event that you are not satisfied with this response, I want to advise you of your rights. You have the right to submit a written appeal to me that specifically states the word "appeal" and identifies the reason or reasons for reversal of this denial by myself.

In addition, you may also seek judicial review of this denial pursuant to MCL 15.240. If you seek judicial review and the Court determines that the public records are not exempt from disclosure, you have the right to receive attorney fees and damages in an amount not to exceed \$500.00

You may contact my office if you have questions.

Sincerely,

Randall Treacher by P. Mastrangelo
Randall W. Treacher
County Administrator/Controller

Appendix K

Jackson Fire Department

518 N Jackson St., Jackson MI 49201 ✱ (517) 788-4150 ✱ FAX (517) 788-4637

FAX Cover Sheet

Date

6/30/09

To

MR. SHADLEY

FAX #

616-957-5629

From

CHIEF BOSELL

Fire Department FAX # (517) 788-4637

Number of Pages (Including this Cover Sheet)

6

If you do not receive all pages please call (517) 788-4150.

UST REMOVED IN 1991

B



Jackson Fire Department

518 N Jackson Street

Jackson MI 49201

788-4079 Fax 788-4637

Inspector Cope/and Date 6-1-93 ☒ No violations observed

HOUSEKEEPING

- 1) F-601.2 Stairways and exitways are kept free of combustible or flammable materials.
- 2) F-500.2.1 There is a minimum of 18" clearance below all sprinkler heads.
- 3) F-2805.1 Flammable or combustible liquid storage does not exceed limitations.
- 4) F-304.1 There is no more than a one day accumulation of trash inside or outside the building.

EXITS

- 5) F-602.1 Exitways and doors are easily recognizable and unobstructed during business hours.
- 6) F-604.1 All illuminated exit signs and emergency lighting is functional.
- 7) F-605.1 All automatic fire doors are kept unblocked and functional.

ELECTRICAL

- 8) F-314.3 The electrical panel has 36" of clearance and all circuits are labeled.
- 9) F-314.5 All covers for electrical outlets, switches, junction boxes, panels are in place.
- 10) F-314.4 Multi-outlet adapters have their own fuse or circuit breakers.
- 11) F-314.6 Extension (flexible) cords are properly used. Proper use is not affixed to structures, extended through walls, ceilings, or floors, or under doors or floor coverings, or subjected to environmental damage.

HEATING

- 12) F-308.2 The heating equipment is in good working order and free of lint and dust.
- 13) F-308.1 Heating units have 36" of clearance from combustible material storage.

FIRE PROTECTION

Inspected and tagged by qualified service personnel

System	Frequency
14) F-604.2 Automatic fire suppression	Annually
15) F-510.2 Standpipe	5 Years
16) F-517.3 Fire extinguisher	Annually
17) F-512.0 Automatic fire alarm	Annually
18) F-508.2 Hood suppression system	6 months
19) F-513.1 Smoke and heat detectors	Annually
Tested or inspected	Schedule
20) F-311.2 Pull station alarm	Monthly
21) F-514.8 Fire pumps	Monthly
22) F-310.3 Hood system grease filters	As needed
23) F-516.3 Fire hydrants and/or fire department connections to sprinklers and standpipes must be kept unobstructed.	

MISCELLANEOUS

- 24) F-105.1 Walls and ceilings must be kept in good repair.
- 25) Sec. 14.82 The address must be posted with numbers at least 4" high, and clearly visible from the street.
- 26) F-2401.3 Compressed gas cylinders must be secured.

SERVICE STATIONS

- 27) F-2804.3.1 Signs warning against fueling vehicles while the motor is running, while smoking, or into unapproved containers are posted.
- 28) F-2804.5 Daily records of product inventory are kept.
- 29) Attendant knows the location and operation of pump controls and safety equipment.
- 30) 29.208 There must be properly working two way communication between the attendant and customers.

Warning: Damage or injury resulting from delay or failure to comply with this notice will be attributed to negligence on the part of the party or parties.

When all violations are corrected, complete and return this section by mail, or fax.

Account Number 1796Business Owen Machine & Tool Inc.Address 546 N. Mechanic St.

Items numbered _____ found to be
in violation, are corrected.

Signed Mark S. Olson

2-93

Date 6-1-93

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

DAVID F. HALES Director

NATURAL RESOURCES COMMISSION

THOMAS J. ANDERSON
MARLENE J. FLUHARTY
GORDON E. GUYER
KERRY KAMMER
ELLWOOD A. MATTHEWSON
O. STEWART MYERS
RAYMOND POUPORE

4th Floor
State Office Building
301 E. Louis Glick Hwy.
Jackson, MI 49201

November 7, 1990

Mr. Daniel Jacobs
Jackson Smith Beverages
546 N. Mechanic Street
Jackson, Michigan 49201

Dear Mr. Jacobs:

SUBJECT: Underground Storage Tank System Release
546 N. Mechanic Street, Jackson, Michigan

On November 5, 1990, the Michigan State Police Fire Marshall Division received notification that there was a confirmed release at the above referenced location.

The Leaking Underground Storage Tank Act, P.A. 478 1988, requires that initial contamination abatement measures be taken. As specified in Section 7(1), these measures include: 1) removing as much of the product from the underground storage tank system as is necessary to prevent further release, 2) preventing further migration of contamination of above ground or exposed below ground releases, 3) monitoring and/or mitigating any fire or safety hazards, 4) remediating contaminated soil, and providing this office reasonable notice and opportunity to monitor these activities, 5) investigating for the presence of free product and begin free product removal as soon as possible, and 6) sampling soil and groundwater to evaluate the level of contamination.

If contaminated soil is stockpiled on site, you must place a tarp or other protection underneath and over the soil pile. In addition, snow fence and yellow caution tape or other type of warning should be posted in and around the contaminated soil. The soil should be removed from the site as soon as possible.

As required by Section 7(2), a report summarizing the initial abatement steps you have taken must be submitted to this office by November 25, 1990. If the report indicates contamination remains at this site, follow-up reports and a site investigation work plan for determining the extent of contamination must be submitted, as specified in Sections 7(4), 7(5) and 7(6), by December 20, 1990.

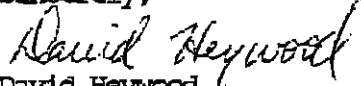
The following documents are enclosed for your reference:

1. A copy of Act 478, which defines the responsibilities of an owner/operator of a leaking underground storage tank system.

2. Our Waste Management Division guidance (draft issued in May 1988) which provides information on the scope of data needed to currently conclude a site is clean.
3. A copy of the MUSTFA contractor list. It is the responsibility of owners or operators filing claims under the Michigan UST Financial Assurance Act, (MUSTFAA) P.A. 518 of 1988, as amended, to assure that the prime contractor for corrective actions is on the current approved contractor list.

Please contact me if you have any questions or need additional information.

Sincerely,



David Heywood
Environmental Response Division
Jackson District
(517) 788-9598

cc: City of Jackson
Jackson Fire Department
Jackson County Health Department
Gary Klepper, MDNR

CITY OF JACKSON FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

518 N. JACKSON

(517) 788-4079

TEMPORARY HAZARDOUS ACTIVITY PERMIT:

I, ~~OWNER~~ AGENT Dan Messerly DOING BUSINESS AS R.W. Messerly CompanyADDRESS 2322 Brooklyn Road, Jackson, MI PHONE NO. 787-2960

IS HEREBY AUTHORIZED A PERMIT TO CARRY OUT HAZARDOUS ACTIVITY AS OUTLINED BY THE CITY
THE JACKSON FIRE PREVENTION CODE CHAPTER 89. I UNDERSTAND THAT THE PERMIT MUST BE
POSTED IN A CONSPICUOUS PLACE IN MY PLACE OF BUSINESS. I ALSO UNDERSTAND THAT ALL
PROVISIONS OF THE CODE GOVERNING MY PLACE OF BUSINESS MUST BE ADHERED TO OR THIS
PERMIT MAY BE REVOKED. I ALSO UNDERSTAND I HAVE THE RIGHT TO APPEAL TO THE BUILDING
BOARD OF APPEAL WITHIN (30) DAYS IF THIS PERMIT IS REVOKED, AS LONG AS THERE IS NO
LIFE THREATENING DANGER. THIS PERMIT IS NOT TRANSFERABLE AND ANY CHANGE IN USE,
OPERATION OR TENANCY SHALL REQUIRE A NEW PERMIT.

THIS PERMIT SHALL BE VALID FROM 09 /12 /90 TO 03 /11 /91BUILDING ADDRESS: 546 North Mechanic Street PERMIT NO. 90-027T

OCC. GROUP/DIV. _____ CONSTRUCTION TYPE _____ FIXED PROP. USE _____

ZONE DIST. _____ COMMERCIAL TENANT Jack Smith Beverages

BUILDING OWNER _____ OWNER ADDRESS _____

TYPE OF WORK TO BE DONE. Removal of two (2) 2,000 gallon tanks.

REMARKS _____

DATE: 09/12/90 APPROVED BY: Tony Greenblade FEE: \$ 25.00

CITY CLERK

DATE ISSUED 09/12/90 FEE COLLECTED BY: INITIALS FEE PAID: \$ 25.00 Check NO. 6970

PLEASE POST OR MAKE AVAILABLE AT THE THE JOB SITE THIS PERMIT OR A COPY AVAILABLE FOR
INSPECTION.

Appendix L

REMEDATION AND REDEVELOPMENT DIVISION PERFECTED LIEN LIST

The Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Division (RRD) has perfected liens¹ on property pursuant to Section 20138 of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.20101 et seq.

The following is a current listing of liens perfected by the RRD on property as of the date that appears on this list. The list will be updated only when the RRD has perfected a new lien on a property, or has released a lien from a property. A new date will then appear on the list. This list does not include any lien(s) that may have been perfected by another MDEQ Division or other entity. For lien information related to the Waste and Hazardous Materials Division or the Office of Geological Survey, please call 517-335-2690 or 517-241-1515 respectively.

The information provided herein cannot be construed or interpreted as legal verification that a perfected lien does not exist on a particular property, or that an RRD lien is the only perfected lien on a property. To obtain legal verification, you must access official records from the appropriate County Register of Deeds and/or the Michigan Secretary of State when applicable.

¹ Liens that have been recorded with the County Register of Deeds Office where the property is located.

County	Township	City/Vlg	Address	Other Description	Lot No	Section	Town Range	Tax Code
Alcona		Harrisville	216 S. US23			13	T26N R9E	
Allegan	Wayland	Wayland Twp.				8	T3N R11W	03-03N-11-W-08DA
Alpena	Alpena		4709 Long Rapids Rd.	Lake Winyah Shores Sub	Lot 43			
Antrim	Riverview		6235 Crystal Springs Rd.	Supervisor's Plat of Riverview	Lot 1			
Antrim	Milton	Rapid City	12929 Cherry Ave.	Plat of New Highlands	Lot 14			
Arenac	Standish		105 N. Main	Assessor's Plat 5	Lot 370			40-2-500-000-370-00
Baraga	L'Anse	L'Anse	Winter St.			9	T50N R33W	
Bay	Bay City		1113 Center Ave.	James Fraser's First Addition	Lots 4&5, Blk 3			
Benzie	Lake Ann Vlg		P.O. Box 62 1st St.		Lots 7 & 9, Blk 28			
Berrien	Buchanan			Himes Add	Lot 5			11-58-3150-0005-001
Berrien	Buchanan			Himes Add	Lot 5			11-58-3150-0005-00-1
Berrien	Watervliet					2	T3S R17W	11-21-0002-0015-01-0
Berrien	Watervliet		106 E. St. Joseph St.	Sutherland's Addition	Lot 1, exceptions			
Berrien	Watervliet					2	T3S R17W	11-21-0023-0014-01-6
Branch	Algansee	Quincy	144/146 Crockett Drive	Woodland plat	Lot 2,3 & land	5	T7S R5W	

County	Township	City/Vlg	Address	Other Description	Lot No	Section	Town Range	Tax Code
Branch	Algonsee	Quincy	144/146 Crockett Drive	Woodland plat	Lot 2,3 & land	5	T7S R5W	
Calhoun	Bedford	Battle Creek		Facility ID 00005228	66, 67, + land	29	T1N R8W	13-04-360-058-W
Calhoun	Bedford	Battle Creek		Facility ID 00005228	66, 67, + land	29	T1N R8W	13-04-360-058-W
Calhoun	Marengo	Marshall	1035 East Michigan Ave.			19	T2S R5W	
Calhoun		Battle Creek				4	T2S R8W	13-54-004-048-00
Cass		Dowagiac	111 North Front St.	Patrick Hamilton's Add	Lot 12			
Cheboygan		Cheboygan				29	T38N R1W	16-053-029-303-002-00
Cheboygan		Cheboygan		J M Pennell's First Add to city	Lot 13, Blk 8			
Chippewa		Daftor	9976 Soo Line Rd.			21	T46N R1W	
Chippewa	Kinross	Kincheloe				19,20, 29,30	T45N R1W	008-019-005-00
Delta	Masonville	Rapid River	US2	H.W. Cole's Second Add	Lots 7,8 Blk 11	29	T41N R21W	21-012-341-007-00 & 21-012-179-021-00 & 21-012-179-020-00
Eaton		Grand Ledge	105 E. Saginaw Hwy	Supervisors Plat #2	Pt of Lot 179			23-400-078-001-790-00 & 791-00 & 791-01
Genesee		Flushing	90 E. Main St.	Assessor's Plat #5	Pt of Lot 98,			
Genesee	Genesee					33	T8N R7E	R-1006-22
Genesee	Genesee					33	T8N R7E	R-1006-22
Genesee		Flint	603 Pingree Ave	Elm Park Sub	Lots 187-195, 196, 230			11-17-352-0187-87
Genesee		Flint	603 Pingree Ave	Elm Park Sub	Lots 187-195, 196, 230			11-17-352-0187-87
Genesee		Flint	3402 Martin Luther King or 121 E. Pasadena		Lots 548 & 549			
Genesee		Flint	3402 Martin Luther King		Lots 544, 545, & 546			
Gladwin		Gladwin	420 E. M-61	Woodland Terrace Annex	1,2,3&4 Blk 18	9	T18N R1E	
Grand Traverse	Blair					7	T26N R11W	
Grand Traverse		Traverse City			Gov Lot 3	2	T27N R11W	28051-102-006-00

County	Township	City/Vlg	Address	Other Description	Lot No	Section	Town Range	Tax Code
Hillsdale	Scipio		Mosherville Rd.		10	T5S	R3W	30-02-010-100-011
Ingham		Lansing	3125 MLK Blvd		29	T4N	R2W	33-01-01-29-476-041
Ingham		Lansing	300 North St.	Turner & Smith's Sub of Lot 6 of Townsend Sub.	Lots 1,2, & Pt. 3 of Lot 6			
Isabella		Mt. Pleasant	226 S. Main St.		Lot 1 & Pt 2, Blk 25			
Kalamazoo		Kalamazoo	222 E. Mosel		10	T2S	R11W	06-10-140-010, 06-10-185-010
Kalamazoo		Kalamazoo	3501 South Burdick St.	Supv Plat of Henry Johnson Plat	Lot A			
Kalamazoo		Alamo			26	T1S	R12W	01-26-251-019
Kalamazoo		Vlg. of Vicksburg		Wolverton's Revised Addition	18	T4S	R10W	39-15-18-100-018
Kalamazoo		Portage	9008 Portage Rd.	Ames West Lake Pk.	Lots 58,59,60			
Kalamazoo		Kalamazoo	8011 West D. Ave		21	T1S	R12W	
Kalamazoo		Wakeshma	13995 East W Ave.		16	T4S	R9W	16-16-480-190
Kalkaska		Kalkaska			29	T27N	R7W	
Kalkaska		Kalkaska			29	T27N	R7W	
Kent		Grand Rapids		6,7,8,4,5 + add parcel	41-14-19-330-017			
Kent		Grand Rapids	2555 Oak Industrial Drive		22	T7N	R11W	
Kent		Wyoming	2539 28th St, SW		9	T6N	R12W	41-17-09-451-013
Kent		Vlg of Sparta	112 N. State St.		14	T9N	R12W	
				Pt of Lot 34, Blk 1				
Kent		Courtland	8413 Meyers Lake Rd.		33	T9N	R10W	
Kent		Wyoming	2539 28th St, SW		9	T6N	R12W	41-17-09-451-013
Lake		Pleasant Plains	M-37	Pere Marquette Plat	107,108,78,79			
Lake		Pleasant Plains	M-37	Pere Marquette Plat	Lot 2052,53,80-83,103-106			
Lake		Pleasant Plains	M-37	Pere Marquette Plat	part of 20,21			

County	Township	City/Vlg	Address	Other Description	Lot No	Section	Town Range	Tax Code
Lapeer	Rich					32	T10N R10E	44-018-032-029-00
Lapeer	Rich					32	T10N R10E	44-018-032-029-00
Livingston	Hamburg		10776 Hall Rd			25	T1N R5E	47-15-25-400-014
Livingston	Putnam					27	T1N R4E	14-27-400-002 30147080
Livingston	Brighton			Smith & McPherson Addition	219,220,221	30	T2N R6E	18-30-300-017
Livingston	Brighton			Smith & McPherson Addition	219,220,221	30	T2N R6E	18-30-300-017
Livingston	Hamburg		10776 Hall Rd			25	T1N R5E	47-15-25-400-014
Livingston	Fowlerville		308 E. Grand River	Fowler's First Add	Lot 39 Blk 2			05-11-302-014
Macomb	Shelby				#63,64			07-18-401-005,50-07-593-063-00; 07-18-401-004, 50-07-593-064-00
Macomb	Chesterfield					PC 192	T3N R14E	09-21-401-003
Macomb	Chesterfield					PC 192	T3N R14E	09-21-251-002
Macomb	Chesterfield					PC 192	T3N R14E	09-21-401-003
Macomb	Chesterfield					PC 192	T3N R14E	09-21-251-002
Macomb	Macomb	Warren			Lot 33 & 13			13-19-353-004
Macomb	Macomb	Warren			Lot 33 & 13			13-19-353-004
Montcalm	Reynolds	Howard City				35	T12N R10W	59-017-900-083-00 or 092-00
Montcalm	Bloomer					12	T9N R5W	59-002-012-005-00
Montcalm	Reynolds	Howard City				35	T12N R10W	59-017-900-083-00 or 092-00
Montcalm	Bloomer					12	T9N R5W	59-051-700-040-00
Montmorency	Atlanta Vlg		103 State St. Box 615		Lots 5 thru 11, Blk 7			
Muskegon	Moorland		12013 E. Apple Ave			26	T10N R14W	61-12-026-100-0001-00
Muskegon	Moorland		12013 E. Apple Ave			26	T10N R14W	61-12-026-100-0001-00

County	Township	City/Vlg	Address	Other Description	Lot No	Section	Town Range	Tax Code
Oakland	Waterford		Whitfield Estates		Lot 310			13-08-153-001
Oakland	West Bloomfield	West Bloomfield	7055 Cooley Lake Rd.,	Dewey Beach Sub	Lots 371-374, Pt 375-378			18-06-229-033
Oakland		Milford	City of Milford			10,11 T2	R7E	16-10-228-003
Oakland	Groveland					12 T5N	R8E	02-12-276-006
Oakland	Farmington	Farmington Hills	29024 Grand River	Richland State Sub. Resub of Richland's Gardens Sub	Lots 45-51	36 T1N	R9E	23-36-304-022
Oakland		Rochester Hills				24 T3N	R11E	15-24-328-008
Ogemaw	Hill	Lupton	3610 Forest Dr.	Shady Shores Park sub of Gov't Lot 2&3	Pt Lot 1 Blk A, Pt. of Lot 8	8 T23N	R4E	
Osceola	Highland	Marion	18814 M-115			35 T20N	R8W	
Osceola		Evart	202 E. Seventh		479			
Ottawa		Grand Haven		Rycenga's Plat 3	197			70-03-21-415-018
Ottawa	Tallmadge				Gov't 4	12 T6N	R13W	70-14-12-400-003
Ottawa	Crockery	Vig of Nunica		Adsl's Add	Lot 3, Blk 3	15 T8N	R15W	70-04-15-430-018 70-04-14-320-002
Saginaw	Titabawassee	Freeland	160 N. Main			16 T13N	R3E	
Saginaw		Chesaning	525 E. Broad St.		Pt of Lot 5, Blk 15	16 T9N	R3E	
Shiawassee	Shiawassee					26 T6N	R3E	
Shiawassee		Owosso	1725 Corunna Ave.	A V Johnson's Add	Lots 4, 5, 11, 12, 13 Blk 8			
Shiawassee		Owosso	1509 W. Oliver St., City of Owosso			14 T7N	R2E	50-537-000-048-00
Shiawassee		Owosso	210-300 E Monroe St.	A L Williams Second Addition	Blk 1 = 9, 10, 11; Blk 2 = 1-13 AL Williams Second Add			78-010-652-001-004
Shiawassee		Laingsburg		Week's Add	Lot 1, Blk 3			78-022-42-003-001
Shiawassee		Laingsburg		Week's Add	Lot 1, Blk 3			78-022-42-003-001
Shiawassee	Shiawassee					26 T6N	R3E	
St. Clair	Clay		3601 Rattray Lane		Lots 1 & 3			74-14-618-0049-000

County Township City/Vlg Address Other Description Lot No Section Town Range Tax Code

Tuscola Wisner Fairgrove 9006 Bay City Forestville Rd. Parcel B 29 T14N R7E 10-01-0004-790-06

Tuscola Caro Plat of Centerville (Caro) 1 and pt 2 Blk23 3 T12N R9E

Wayne Detroit 48227 14000 Fankall Davy's Fankell Ave Sub Lots 33-36

Wayne Brownstown Flat Rock 28 T4S R10E 58-081-99-0002-000

Wayne Brownstown Flat Rock 28 T4S R10E 58-081-99-0002-000

Wayne Woodhaven 28 T4S R10E 59-080-99-0008-000

Wayne Woodhaven 28 T4S R10E 59-080-99-0008-000

Wayne Brownstown Flat Rock 28 T4S R10E 58-081-99-0001-000

Wayne Brownstown Flat Rock 28 T4S R10E 58-081-99-0001-000

Wayne Detroit 4445 Lawton aka 4450 Plat of RR Concessions, PC 41-58, Out Lot 8, 729

Wayne Woodhaven 28 T4S R10E 59-080-99-0004-000

Wexford Cadillac Improvement Board's Add to City of Cadillac Blk 152,153,154;part 156,157,155 100680000100

Wexford Cadillac Outlot 6 Curmer & Hayes Add. Outlot 6 10-056-00-026-00

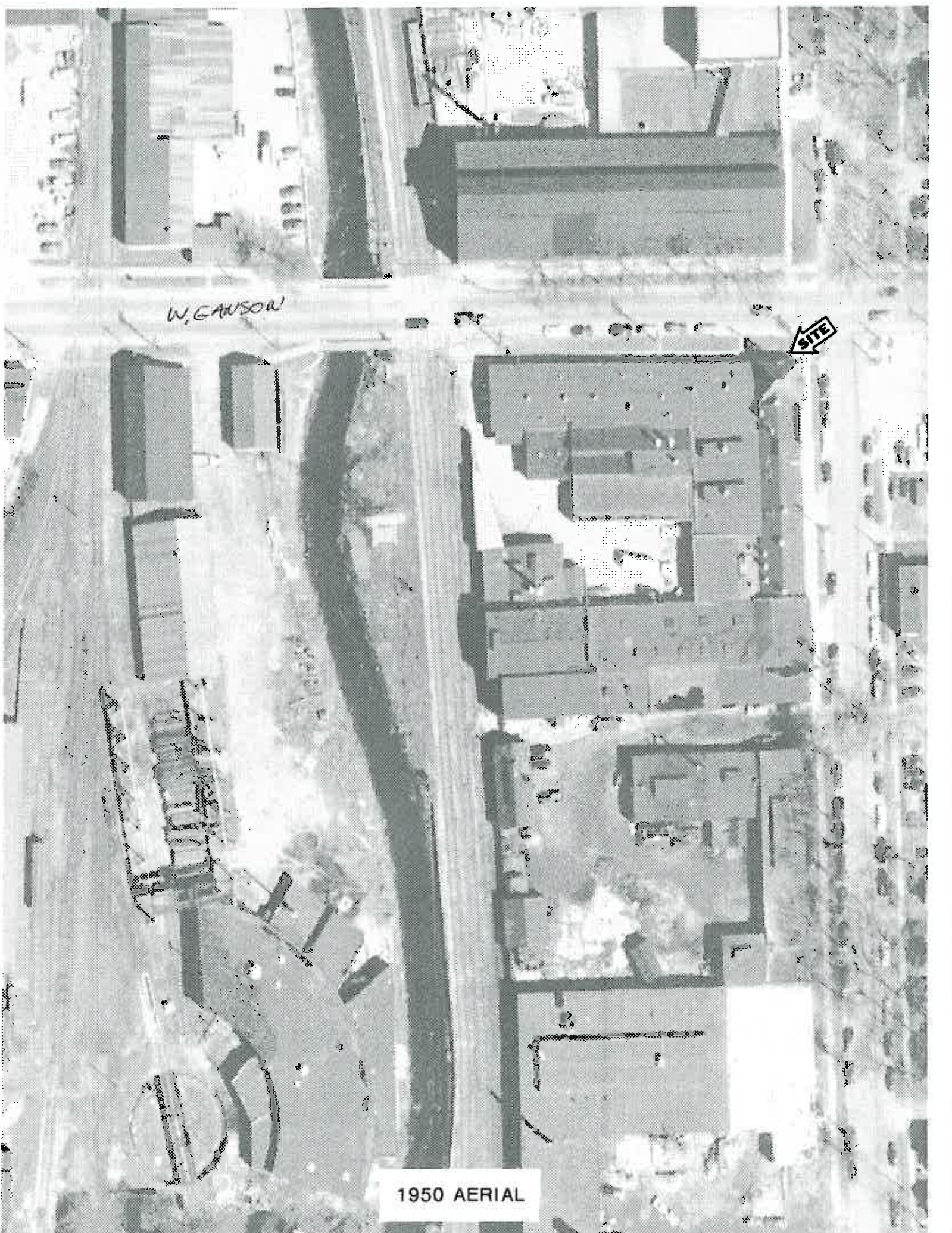
Wexford Cadillac Improvement Board's Add to City of Cadillac Blk 152,153,154;part 156,157,155 100680000100

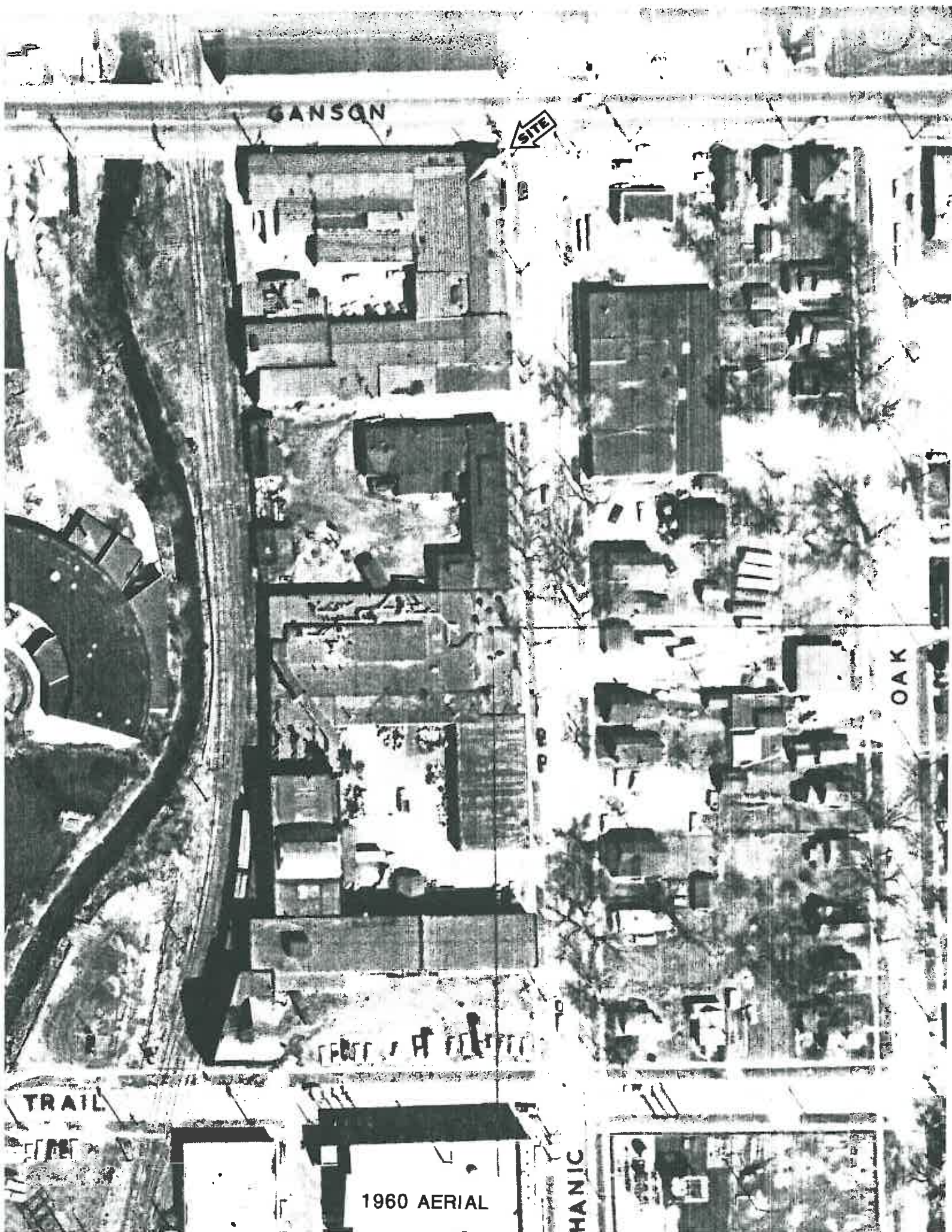
Appendix M

W. GANSON

SITE

1950 AERIAL





GANSON

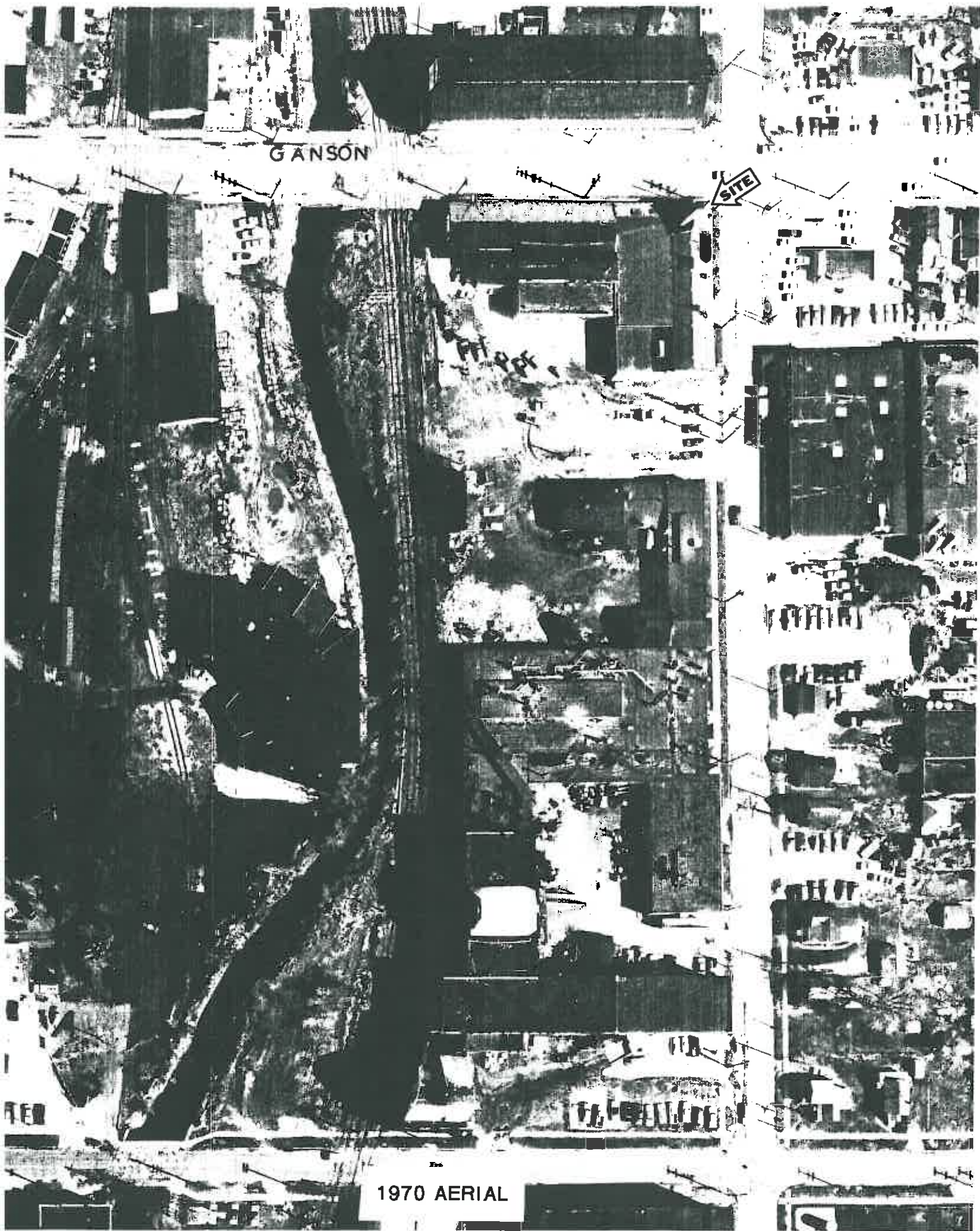
SITE

OAK

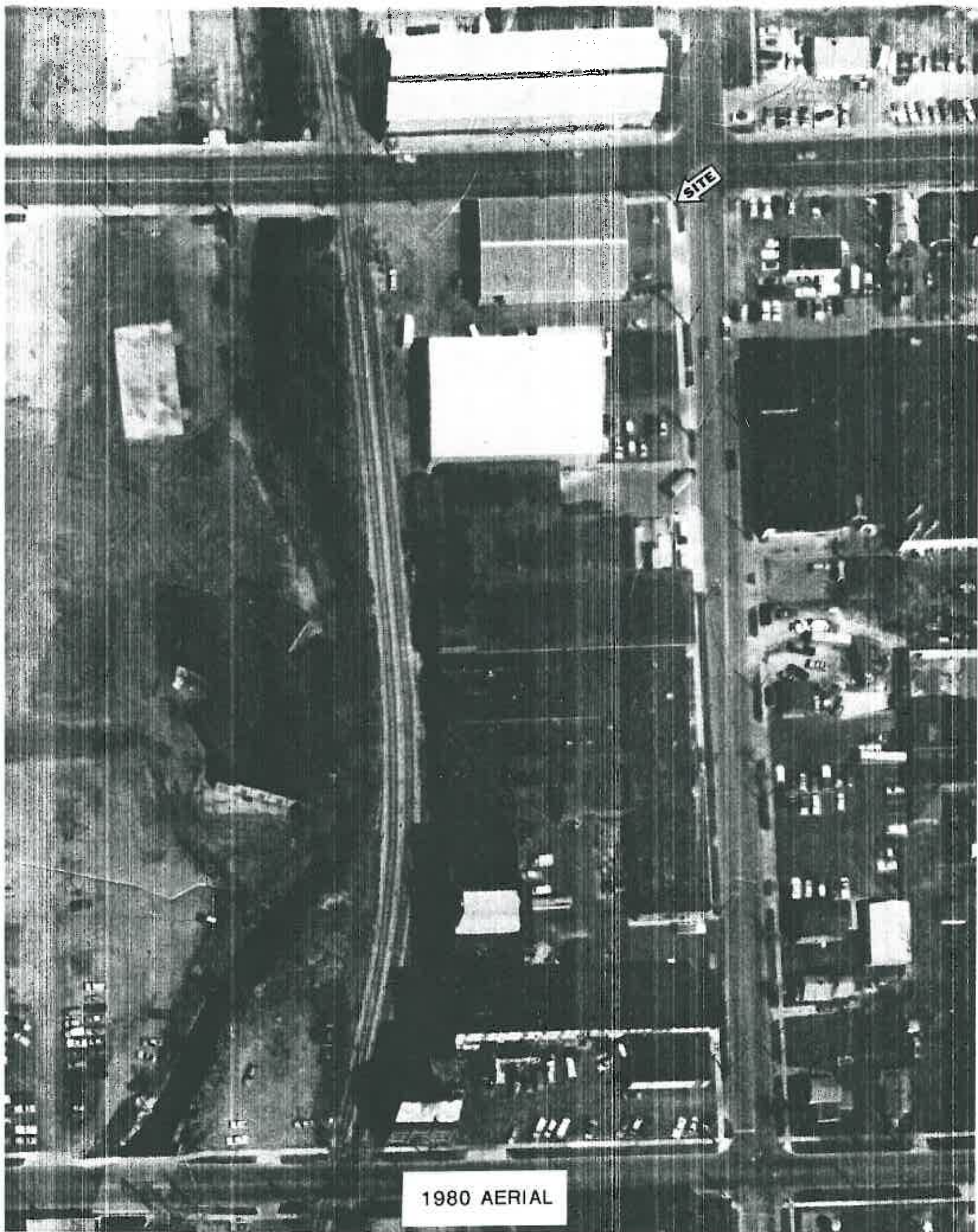
TRAIL

1960 AERIAL

HANIC

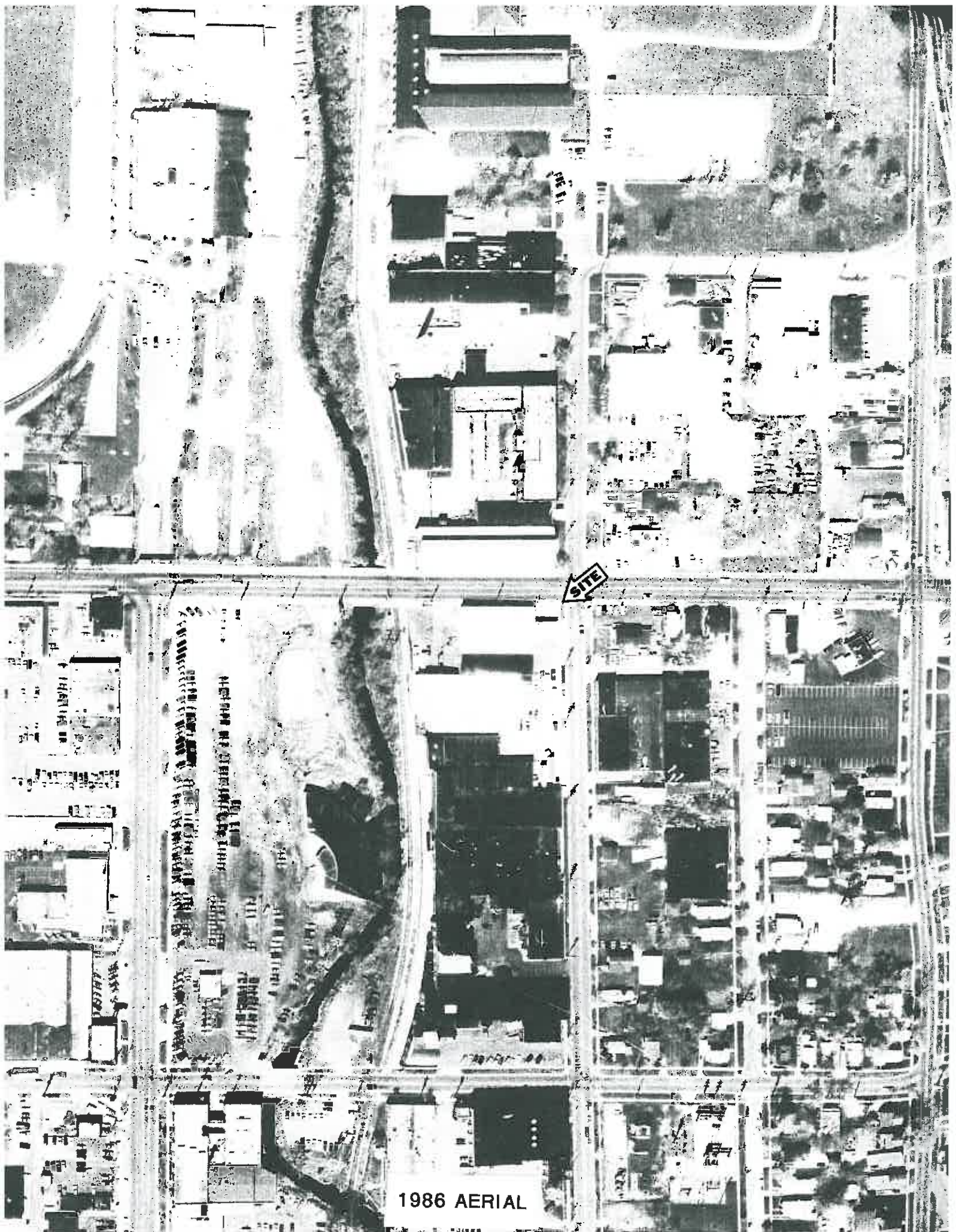


1970 AERIAL

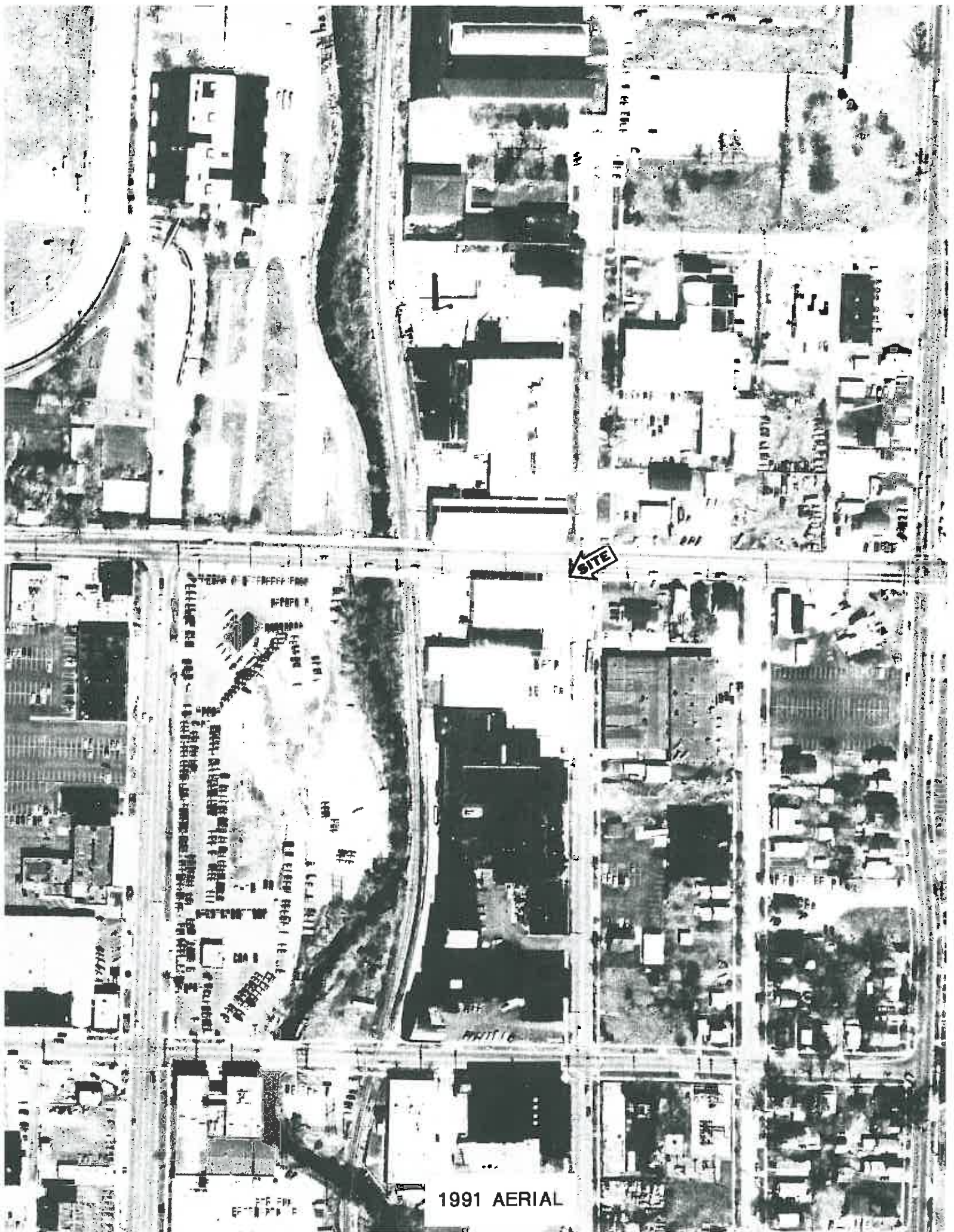


SITE

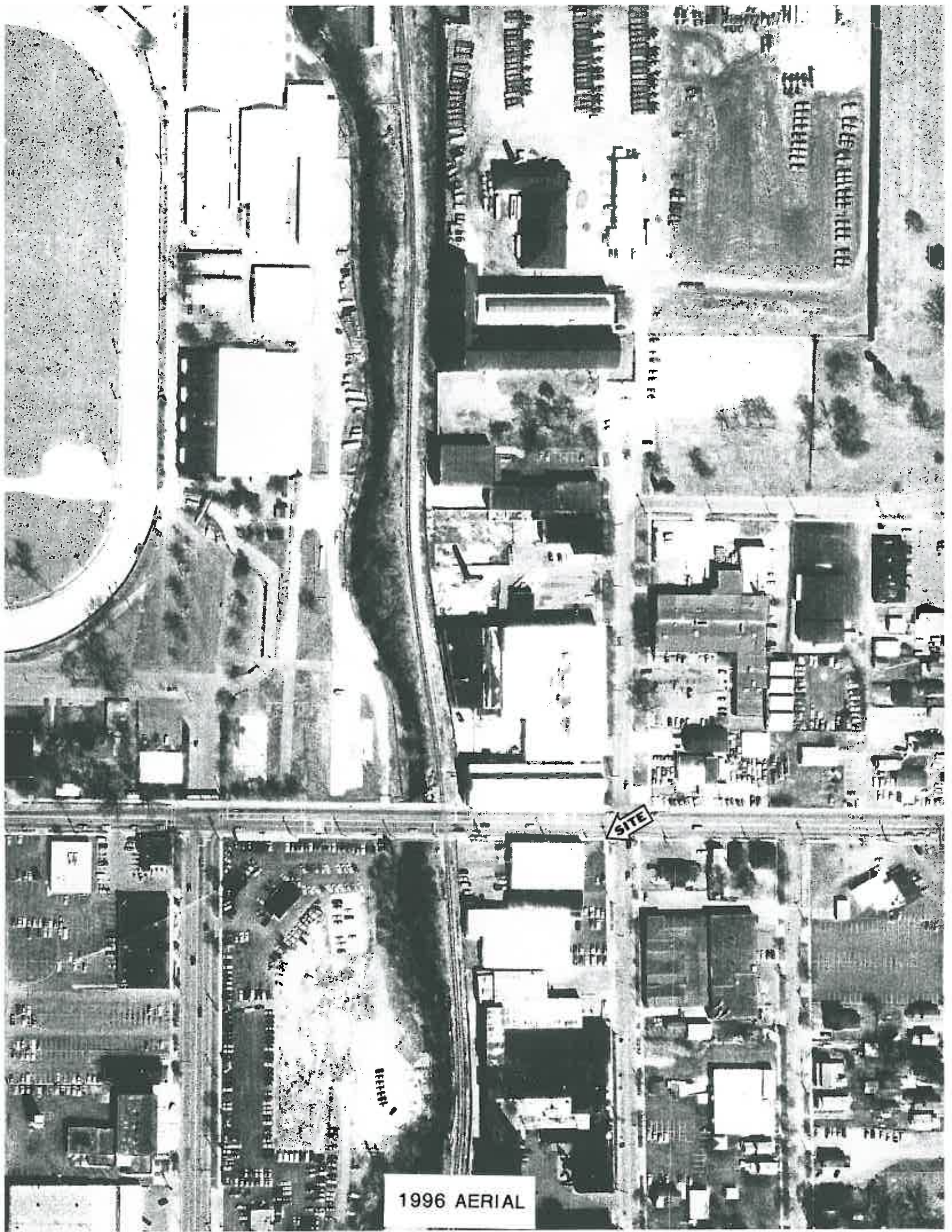
1980 AERIAL



1986 AERIAL

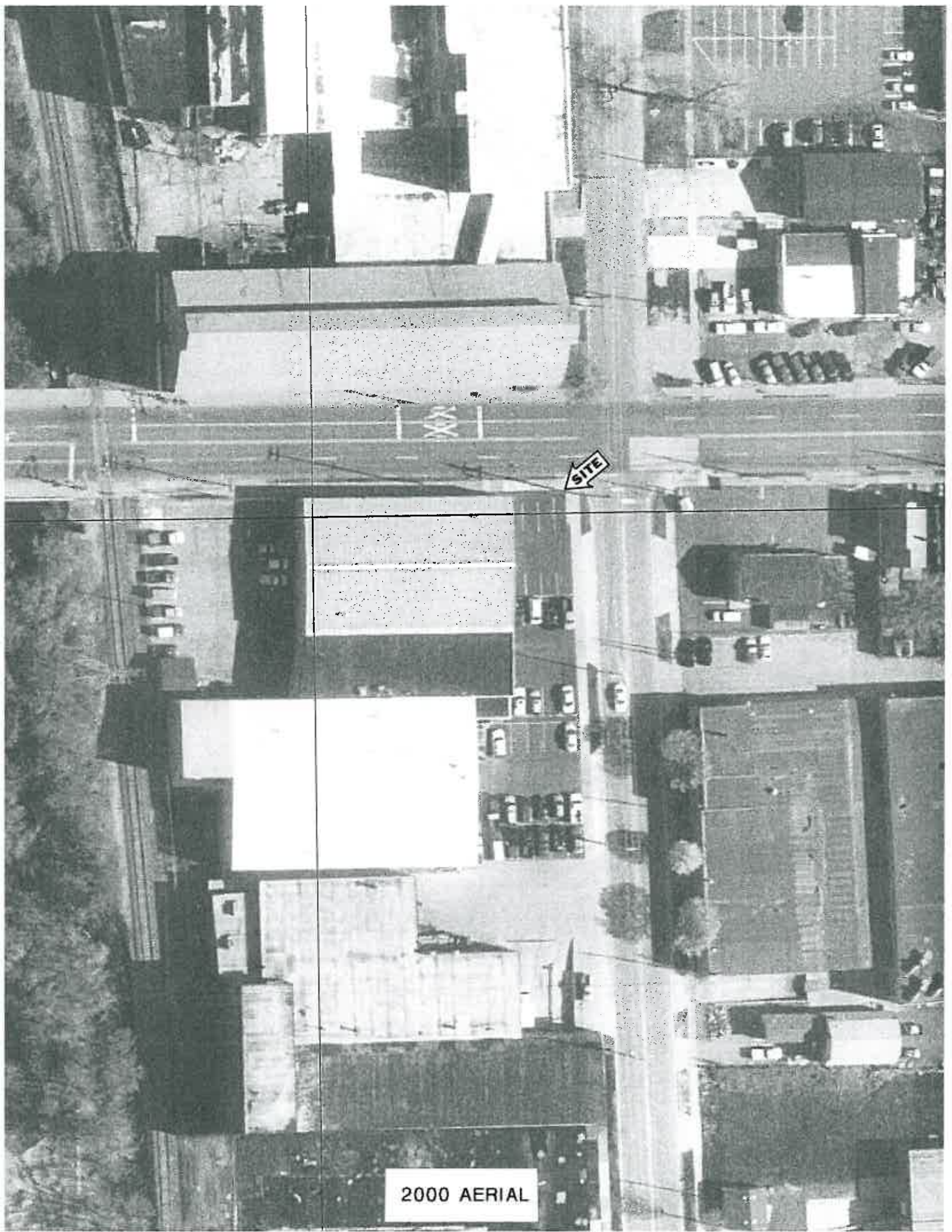


1991 AERIAL



SITE

1996 AERIAL



SITE

2000 AERIAL

Appendix N



№ 12.

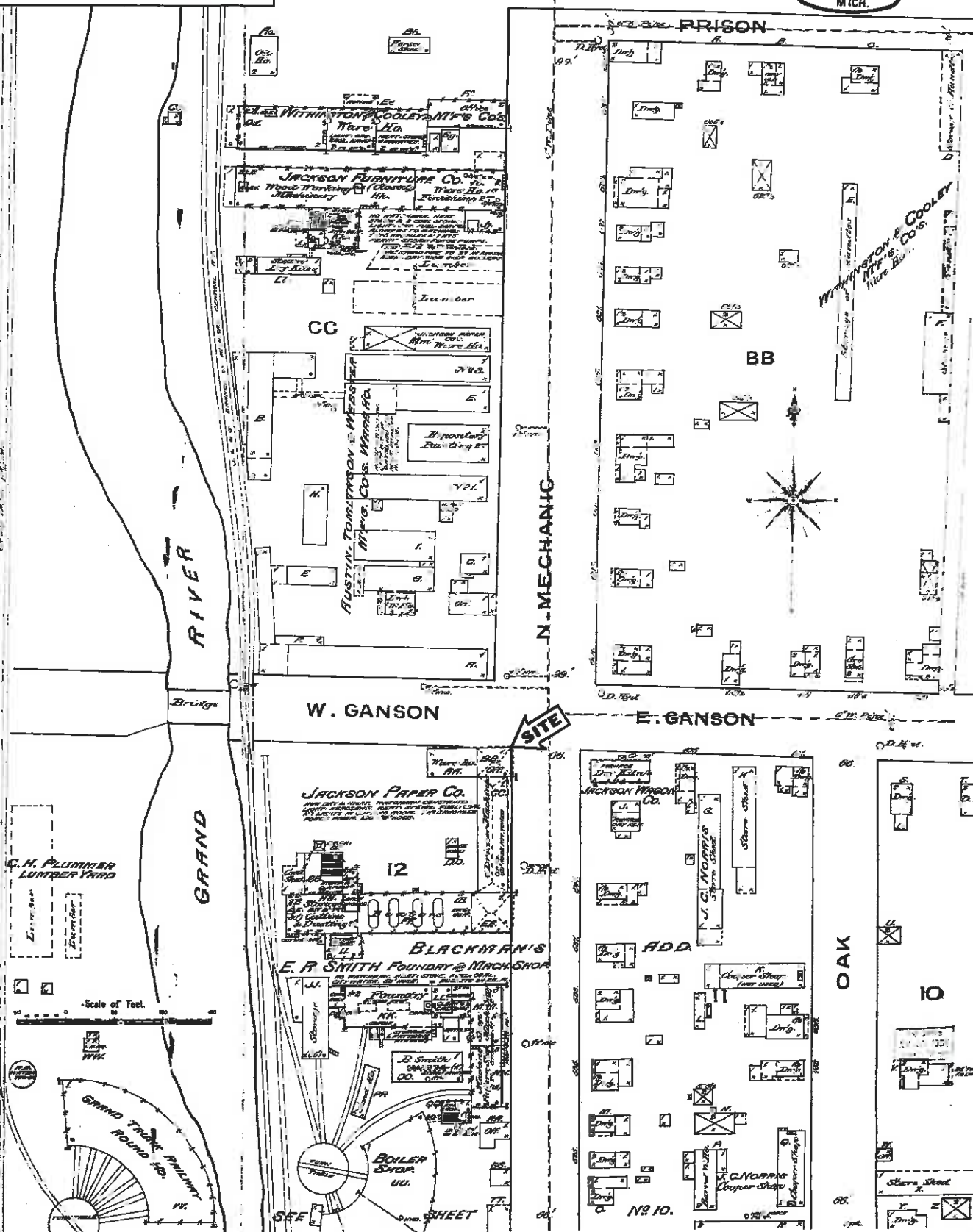
APRIL 1886
JACKSON
MICH.

II

Copyright: 1895

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Certification # 570A-4F08-A7D1



Site Name: Grand Rivers Antisaw
 Address: Grand Rivers Antisaw
 City, ST, ZIP: Jackson MI 49202
 Client: Applied Science & Technology
 EDR Inquiry: 2204035.19
 Order Date: 1/7/2009 9:28:26 AM
 Certification #: 570A-4F08-A7D1

Copyright: 1899



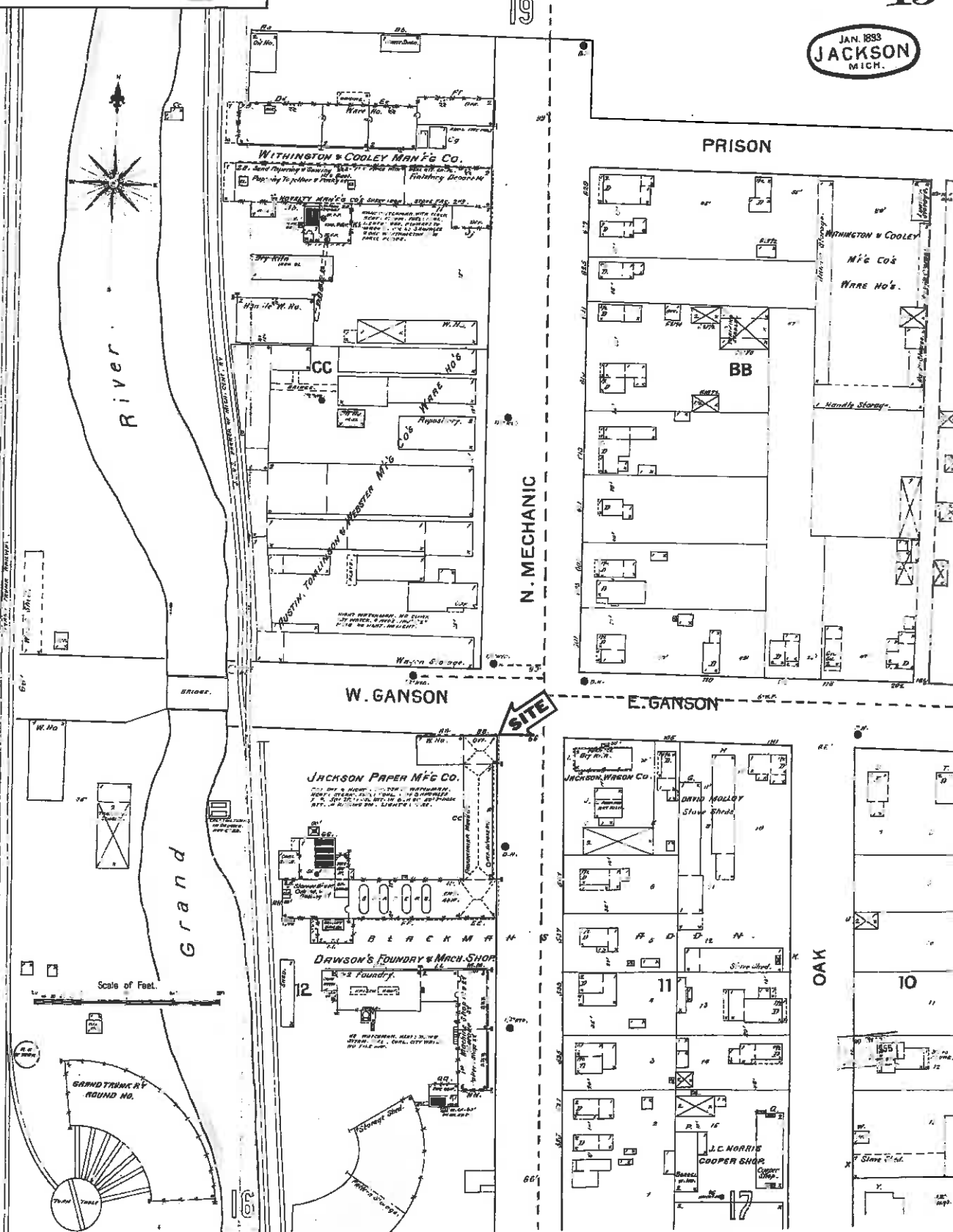
19

15

JAN. 1893
JACKSON
 MICH.

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17

0

JACKSON FAIR GROUNDS

PARK

8

W. GANSON

SITE

N. JACKSON

N. MECHANIC

18

NOVELTY MEWS C.
MARSHES OF DU STOKES PAVING

29

W. TRAIL

Scale of Feet.



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Site Name: Grand Rivers Attewalk
Address: Grand Rivers Attewalk
City, ST, ZIP: Jackson MI 48202
Client: Applied Science & Technology
EDR Inquiry: 2394033.1a
Order Date: 1/7/2009 9:29:28 AM
Certification #: 570A-4F08-A7D1

Copyright: 1907

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43

N. JACKSON

251

W. J. EVANS CO.
Seed Co.

W. TRAIL

40

W. GANSON

Grand River

41

POTTER MFG CO.
M. & METAL ALD TOWNS

N. MECHANIC

41

SITE

S. M. ISBELL SEED CO

7

ROBERTS TASH & CO. CO.

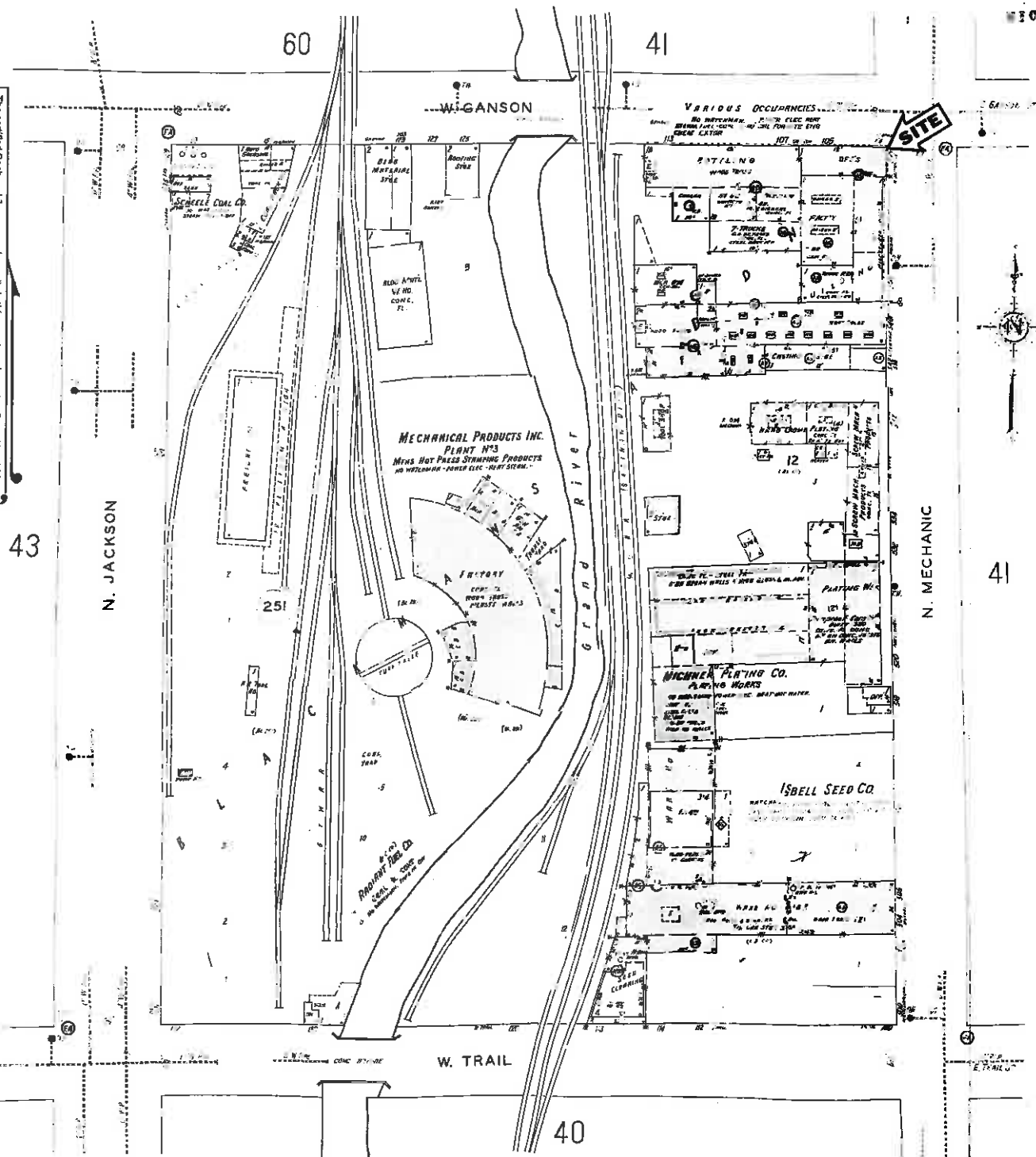
12

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 49202
Client: Applied Science & Technology
EDR Inquiry: 2394033.1s
Order Date: 1/7/2009 9:28:28 AM
Certification #: 570A-4F08-A7D1

Copyright: 1990



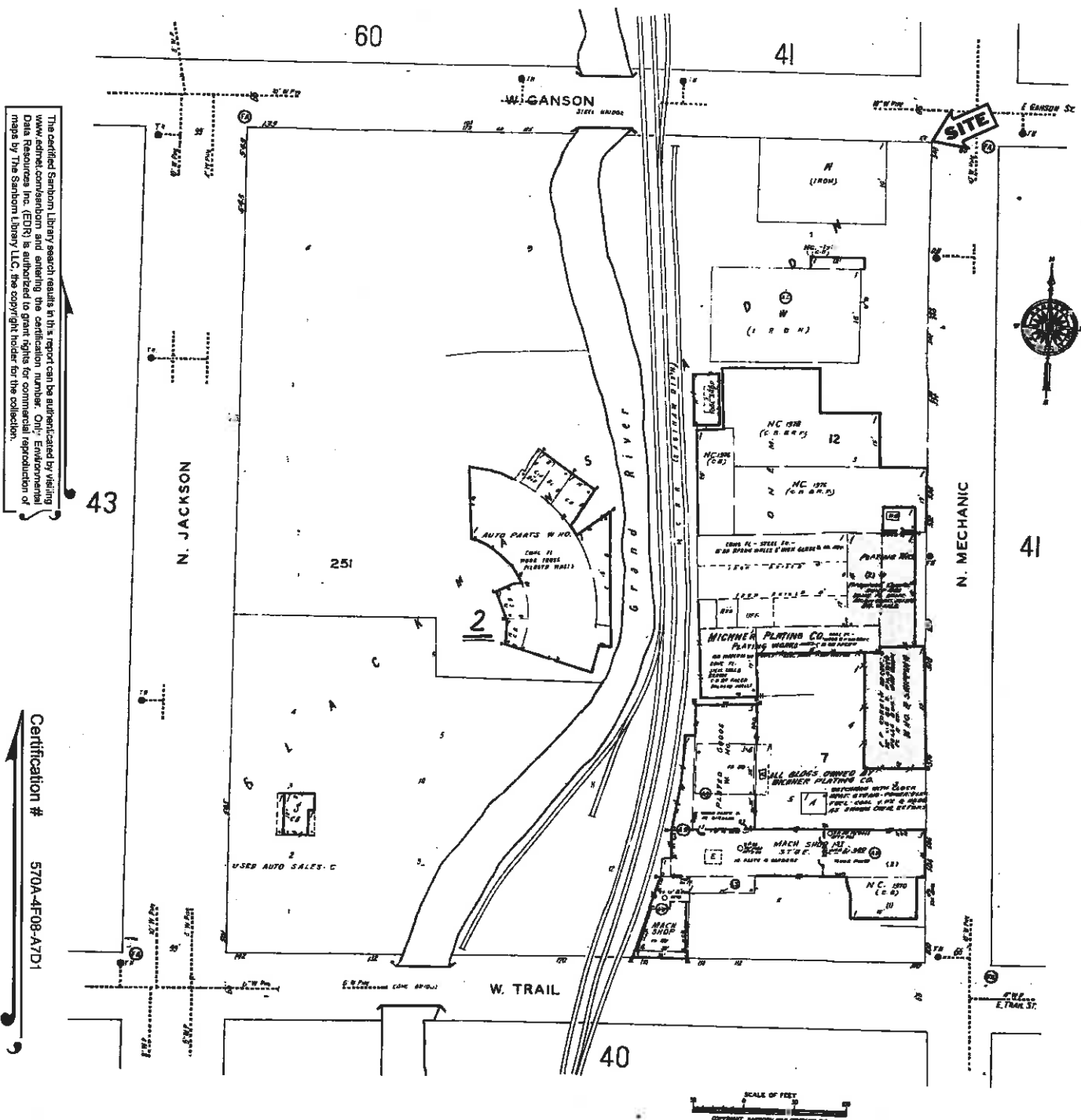
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Certification # 670A-4F08-A7D1

Site Name: Grand Rivers Artwalk
 Address: Grand Rivers Artwalk
 City, ST, ZIP: Jackson MI 48402
 Client: Applied Science & Technology
 EDR Inquiry: 2894033.1s
 Order Date: 1/7/2009 8:28:28 AM
 Certification #: 670A-4F08-A7D1





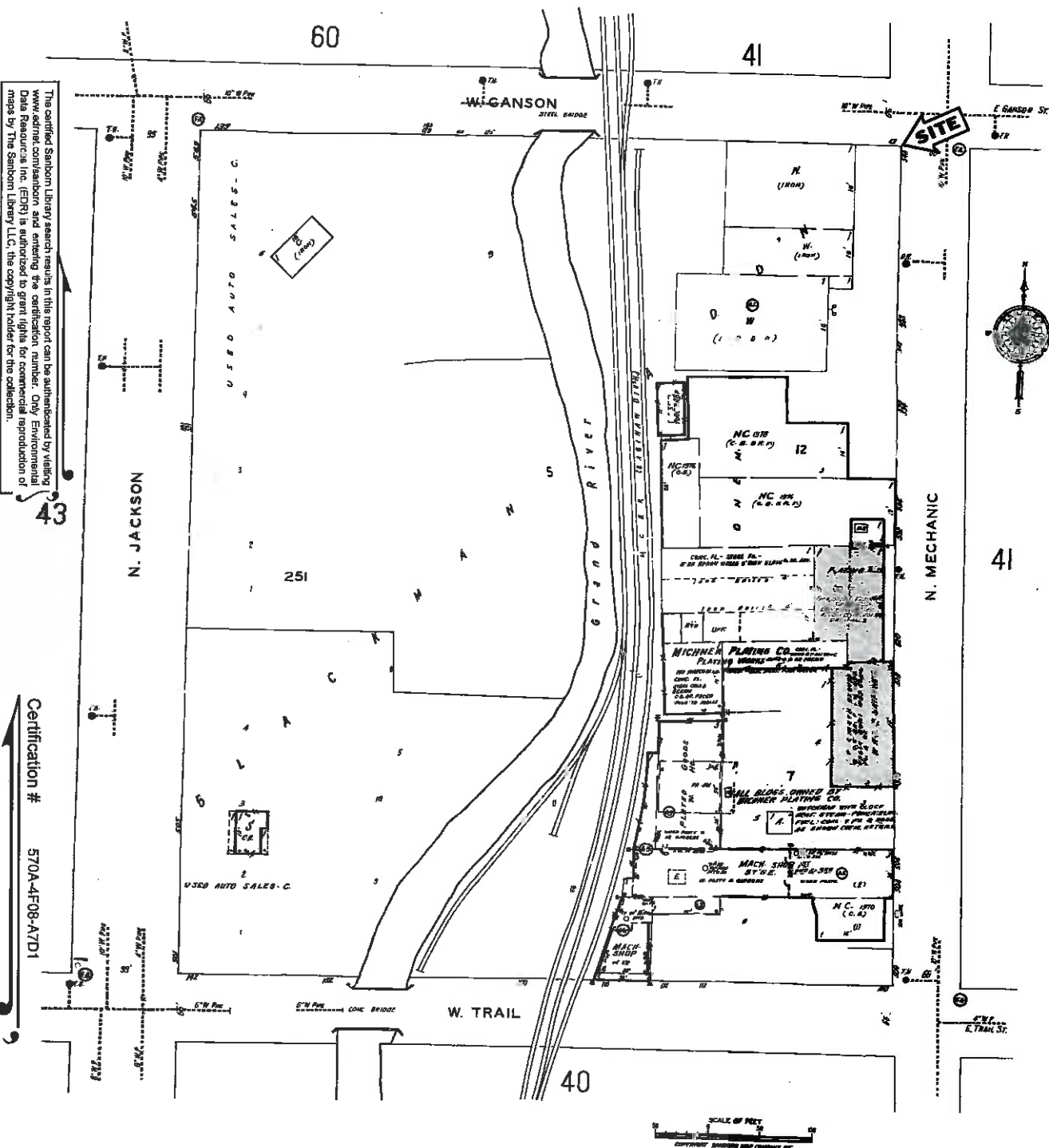
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Certification # 570A-4F08-A7D1

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 48202
Client: Applied Science & Technology
SDR Inquiry: 2394039.16
Order Date: 1/7/2009 9:28:28 AM
Certification #: 570A-4F08-A7D1



Copyright: 1980



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Certification # 570A-4F08-A7D1

Site Name: Grand Rivers Artwalk
 Address: Grand Rivers Artwalk
 City, ST, ZIP: Jackson MI 48202
 Client: Applied Science & Technology
 EDR Inquiry: 2894033 1s
 Order Date: 1/7/2009 8:28:28 AM
 Certification #: 570A-4F08-A7D1

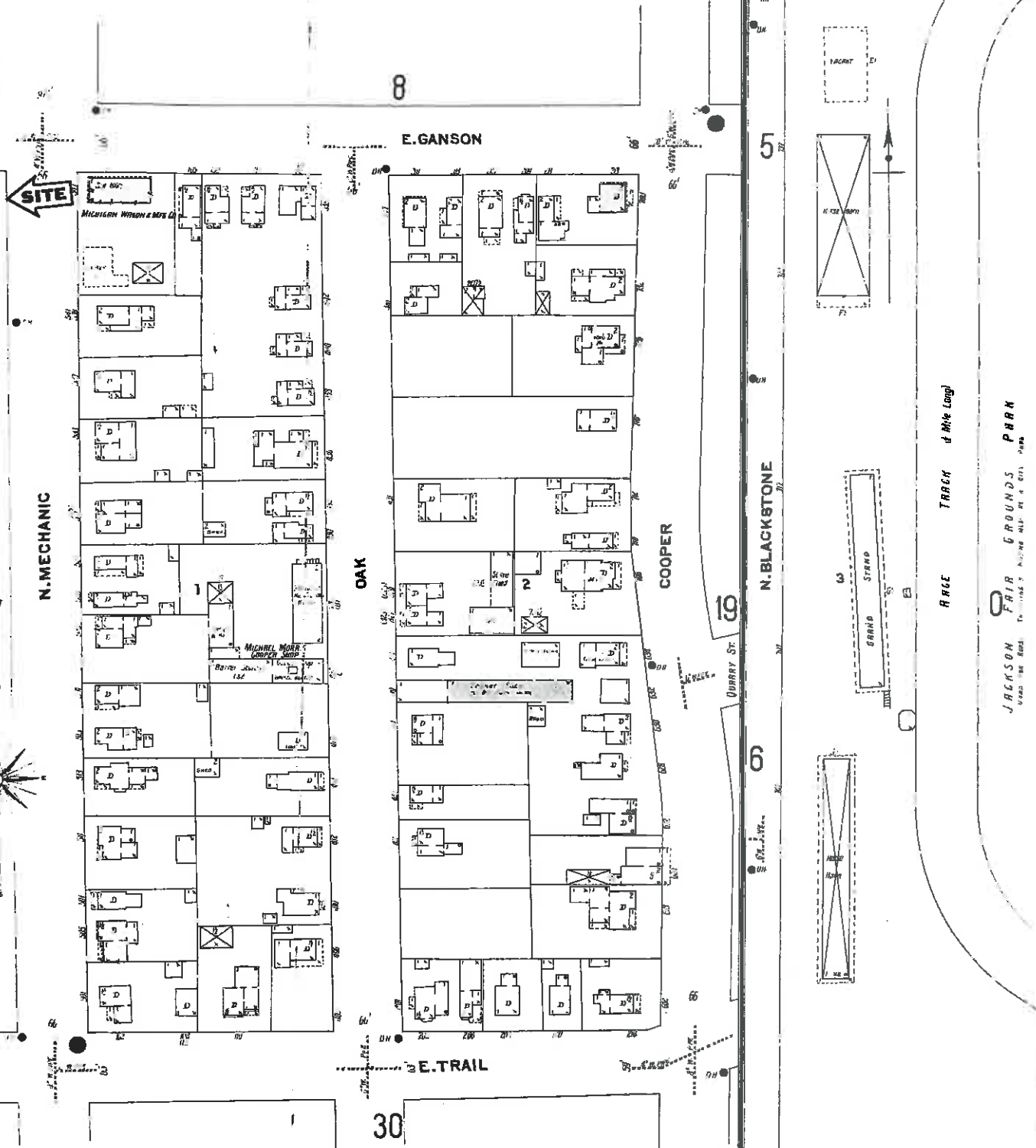


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Certification # 570A-4F08-A7D1

Site Name: Grand Rivers Artswalk
 Address: Grand Rivers Artswalk
 City, ST, ZIP: Jackson MI 49202
 Client: Applied Science & Technology
 EDR Inquiry: 2294033.1s
 Order Date: 1/7/2009 9:28:28 AM
 Certification #: 570A-4F08-A7D1

Copyright: 1907



18

N. BLACKSTONE

W. GANSON 16

SITE

44 N. MECHANIC

60

E. GANSON

OAK

42

E. TRAIL

COOPER

60

Grand River

60

AMERICAN FURNACE & BOILER

WITHINGTON WORKS
 MFR HOES, FORKS & RAILS

W. GANSON

44

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Certification #

Site Name: Grand Rivers Artswrk
 Address: Grand Rivers Artswrk
 City, ST, ZIP: Jackson MI 49202
 Client: Applied Science & Technology
 EDR Inquiry: 2294033.15
 Order Date: 1/7/2009 9:26:26 AM
 Certification #: 570A-4F08-A7D1

Copyright: 1930



00000000



60

E. GANSON

SITE

44 N. MECHANIC

OAK

COOPER

E. TRAIL

42

60

60

W. GANSON

44

W. GANSON

PRR SUB-DIVN

WILLOW

AV

WINIFRED

45

SCALE 100 FT TO AN INCH

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 48202
Client: Applied Science & Technology
EDR Inquiry: 2394033.16
Order Date: 1/7/2009 9:28:28 AM
Certification #: 570A-4F08-A7D1

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Certification #



60

E. GANSON

60

SITE

44 N. MECHANIC

OAK

COOPER

GRAND RIVER

W. GANSON

44

E. TRAIL

42

30

BLACKMAN TWP

THIS DETACHMENT
NOT REvised SINCE 5/88

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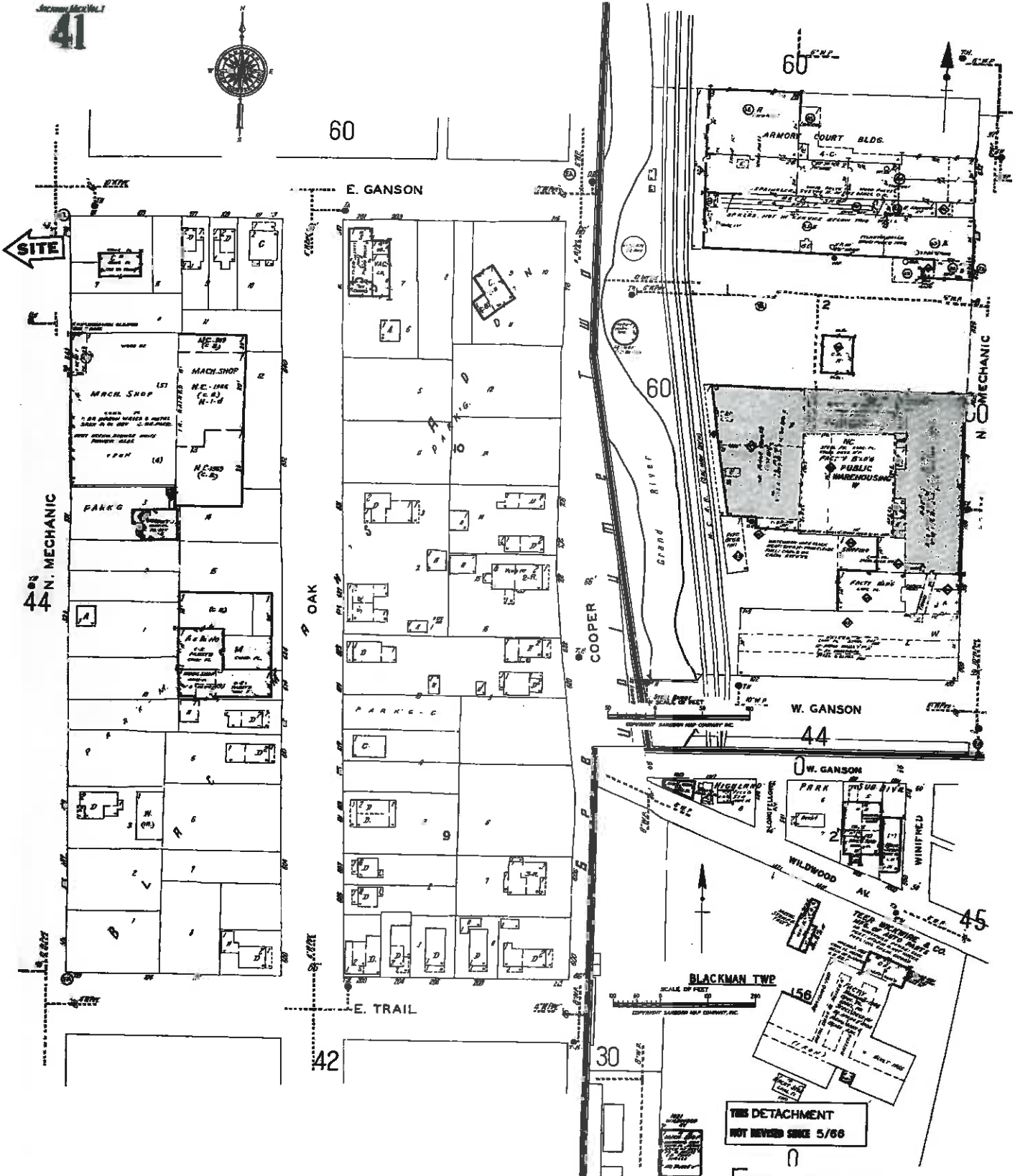
570A-4F08-A7D1

Certification #

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 49202
Client: Applied Science & Technology
EDR Inquiry: 2394033.18
Order Date: 1/7/2008 9:25:15 AM
Certification #: 570A-4F08-A7D1

Copyright 1980





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Certification #

**THIS DETACHMENT
NOT REVED SINCE 5/66**

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 48202
Client: Applied Science & Technology
EDR Inquiry: 2294033.18
Order Date: 1/7/2009 9:28:28 AM
Certification #: 570A-4F08-A7D1

Copyright: 1990



S E E U O I U M T K O

SCALE 100 FEET TO AN INCH

60

(174-18)

COOPER

PRISON

N. MECHANIC

AMERICAN FORK & WIRE COMPANY

WASHINGTON WIRE

Grand River

SITE

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44

W. GANSON

570A-4F08-A7D1

43

Certification #

JACKSON COUNTY FAIR GROUNDS

248

MYRTLE

GEORGE

N. BLACKSTONE

53

59

Site Name: Grand Rivers Attowalk
Address: Grand Rivers Attowalk
City, ST, ZIP: Jackson MI 48202
Client: Applied Science & Technology
EDR Inquiry: 2394033.1s
Order Date: 1/7/2009 9:29:25 AM
Certification #: 570A-4F08-A7D1

Copyright: 1992



MICHIGAN STATE PRISON

62

62

W. NORTH

SCALE 100 FT TO AN INCH

60

S E E W O I W T

COOPER

EVANSTON CT. (PRISON)

N. MECHANIC

Grand River

N. NORTH

JACKSON COUNTY FAIR GROUNDS

N. BLACKSTONE

OLD MICHIGAN STATE PRISON & JACKSON ARMOY

RUNNING ON CITY CORNER
MICHIGAN STATE PRISON IN 1875
WAS BUILT ON THE CORNER OF
N. NORTH & N. MECHANIC STS.
THE PRISON WAS IN USE UNTIL 1937
WHEN IT WAS DEMOLISHED. THE
BUILDING WAS REBUILT IN 1937
AS A POLICE STATION. IT WAS
DEMOLISHED IN 1967.

JACKSON ARMOY

MYRTLE

GEORGE

Site Name: Grand Rivers Artwalk
Address: Grand Rivers Artwalk
City, ST, ZIP: Jackson MI 48602
Client: Applied Science & Technology
EDR Inquiry: 2394033.1a
Order Date: 1/7/2009 9:28:26 AM
Certification #: 570A-4F08-A7D1

Copyright: 1992

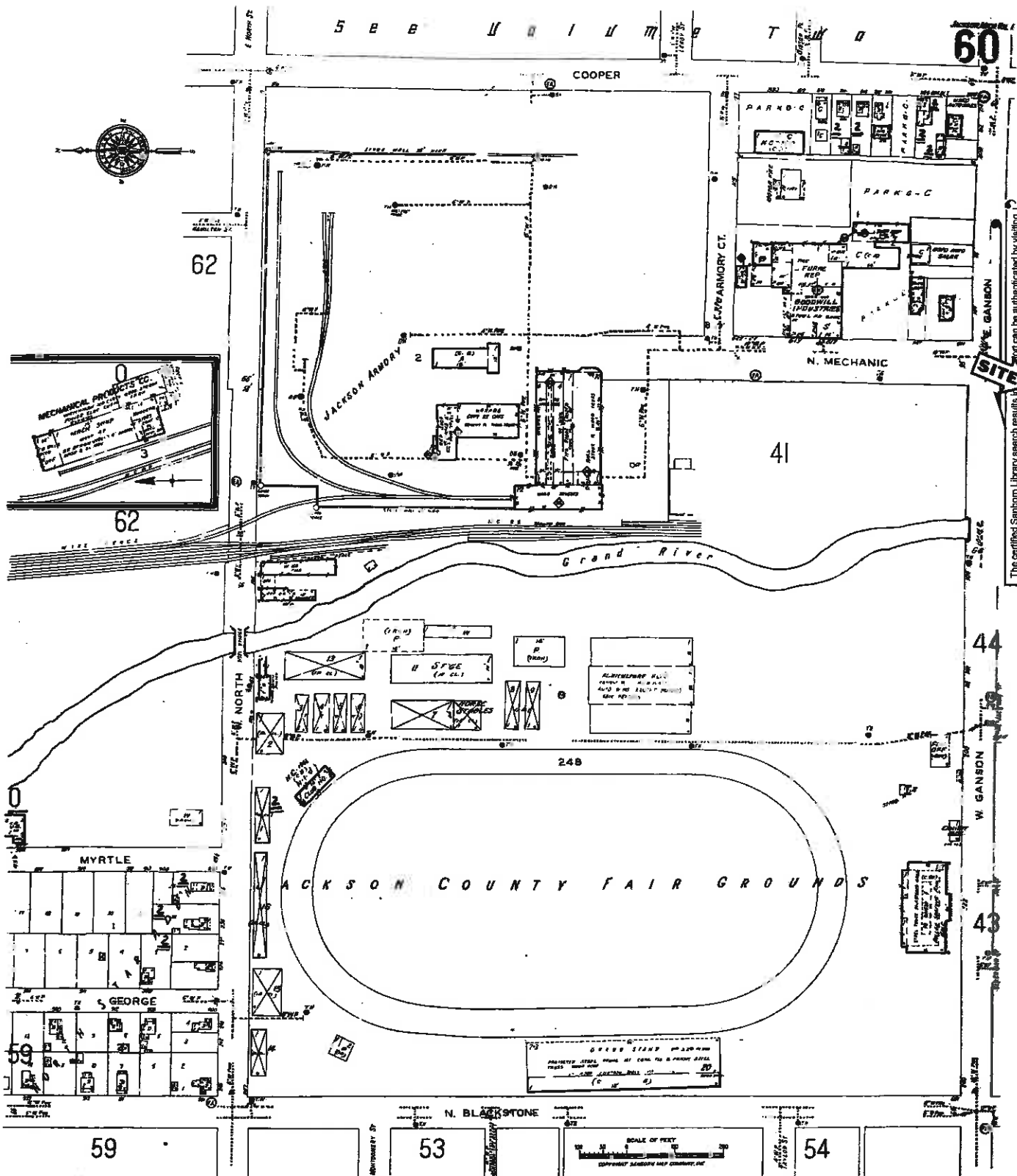


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SITE

W. GANSON
570A-4F08-A7D1

4
Certification #



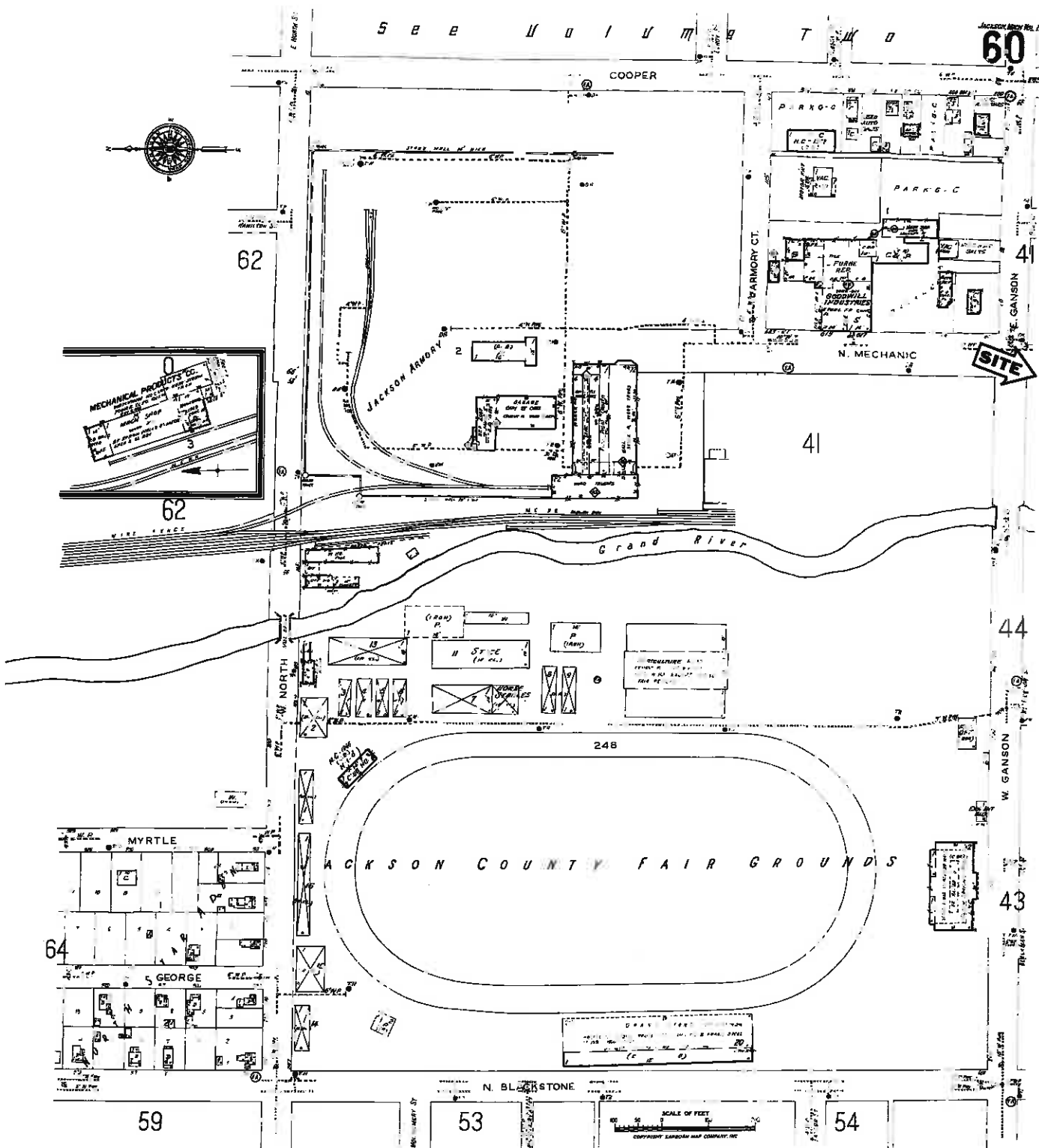
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Site Name: Grand Rivers Artwalk
 Address: Grand Rivers Artwalk
 City, ST, ZIP: Jackson MI 49202
 Client: Applied Science & Technology
 EDR Inquiry: 2394033.19
 Order Date: 1/7/2009 9:28:28 AM
 Certification #: 570A-4F08-A7D1



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570A-4F08-A7D1

Certification #

Site Name: Grand Rivers Artwalk
 Address: Grand Rivers Artwalk
 City, ST, ZIP: Jackson MI 48602
 Client: Applied Science & Technology
 EDR Inquiry: 2294025.19
 Order Date: 1/7/2008 9:28:28 AM
 Certification #: 570A-4F08-A7D1

Copyright: 1992



Appendix O

City Directory Review
546 N. Mechanic Street, Jackson, Michigan
Library of Michigan, Lansing, Michigan

<u>2008 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	No Listing Chelsea Grinding Co. No Listing Hitches & More Inc. Ace Auto Inc.
<u>2002 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	Open Machine Systems, Owen Machine & Tool Inc., Quality Transmission Chelsea Grinding Co., DAS Group, Inc. No Listing Hitches & More Inc. Ace Auto Inc.
<u>1997 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	Owen Machine & Tool Inc. Linear Auto-Matic Systems Co. No Listing Quality Automotive Service Ace Auto Inc.
<u>1985 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	Jack Smith Beverage, Inc. Linear Auto-Matic Systems Co. West John Outdoors, RC Paint & Body Co. J&J Auto Sales Vacant
<u>1975 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	Jack Smith Beverage, Inc. Linear Auto-Matic Systems Co. Weatherwax Investment Company Don's Used Cars Vairas Used Cars Inc.
<u>1965 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	No Listing Index Machine & Tool Co. Inc. Acme Industries Sisk "Red" Service Station Uncle Bud's Service Gas Station
<u>1955 Polk's</u> 546 N. Mechanic 543 N. Mechanic 600 N. Mechanic 101 E. Ganson 100 E. Ganson	No Listing No Listing Acme Industries Jim's Texaco Service (auto repair) Kutchka Edward Gas Station

Property in Bold

Attachment 9.5

Material Safety Data Sheets

Material Safety Data Sheet

Super S Motor Oil SAE 5W-30
MSDS# 65208S
Version 2.0
Effective Date 05/14/2009
According to OSHA Hazard Communication Standard, 29 CFR
1910.1200

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S Motor Oil SAE 5W-30

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS No.	Concentration
Zinc compounds, NOS	25103-54-2	1.00 - 5.00 %

The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.
Highly refined mineral oils and additives.

3. HAZARDS IDENTIFICATION

	Emergency Overview
Appearance and Odour	: Amber. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: Not classified as dangerous for supply or conveyance.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards
Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.

Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Eye Contact : May cause slight irritation to eyes.

Ingestion : Low toxicity if swallowed.

Other Information : Used oil may contain harmful impurities.

Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas.
Ingestion may result in nausea, vomiting and/or diarrhoea.

Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Environmental Hazards : Not classified as dangerous for the environment.

Material Safety Data Sheet

Additional Information : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information : Not expected to be a health hazard when used under normal conditions.

Inhalation : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

Eye Contact : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

Advice to Physician : Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point : Typical 400 °C / 752 °F (COC)

Upper / lower Flammability or Explosion limits : Typical 1 - 10 %(V)(based on mineral oil)

Auto ignition temperature : > 320 °C / 608 °F

Specific Hazards : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

Suitable Extinguishing Media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media : Do not use water in a jet.

Protective Equipment for Firefighters : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures : Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Clean Up Methods : Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or

Material Safety Data Sheet**Additional Advice**

other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE**General Precautions**

Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling

Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage

Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials

For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials

PVC.

Additional Information

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material Source		Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment**Respiratory Protection**

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers. No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of

Material Safety Data Sheet

	material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Amber. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH	: Data not available
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Pour point	: Typical -20 °C / -4 °F
Flash point	: Typical 400 °C / 752 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: Typical 0.85
Density :	Typical 7.43 g/cm ³
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)

Material Safety Data Sheet

Kinematic viscosity : Typical 50 mm²/s at 40 °C / 104 °F
Vapour density (air=1) : > 1 (estimated value(s))
Evaporation rate (nBuAc=1) : Data not available

10. STABILITY AND REACTIVITY

Stability : Stable.
Conditions to Avoid : Extremes of temperature and direct sunlight.
Materials to Avoid : Strong oxidising agents.
Hazardous Decomposition Products : Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment : Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity : Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation : Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation : Expected to be slightly irritating.
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Sensitisation : Not expected to be a skin sensitiser.
Repeated Dose Toxicity : Not expected to be a hazard.
Mutagenicity : Not considered a mutagenic hazard.
Carcinogenicity : Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity : Not expected to be a hazard.
Additional Information : Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible. Continuous contact with used engine oils has caused skin cancer in animal tests.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 >

Material Safety Data Sheet

100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

- Mobility** : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
- Persistence/degradability** : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- Bioaccumulation** : Contains components with the potential to bioaccumulate.
- Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

- Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
- Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

Material Safety Data Sheet

DSL
EINECS
TSCA

All components listed.

All components listed.

All components listed.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Super S Motor Oil SAE 5W-30

Reportable quantity: 89 lbs

Zinc compounds, NOS (25103-54-2)

SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

SARA Toxic Release Inventory (TRI) (313)

Zinc compounds, NOS (25103-54-2) 1.1185%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Zinc compounds, NOS (25103-54-2)

Listed.

16. OTHER INFORMATION

NFPA Rating (Health, : 0, 1, 0

Fire, Reactivity)

MSDS Version Number : 2.0

MSDS Effective Date : 05/14/2009

MSDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulation : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS Distribution : The information in this document should be made available to all who may handle the product.

Super S Motor Oil SAE 5W-30

MSDS# 65208S

Version 2.0

Effective Date 05/14/2009

According to OSHA Hazard Communication Standard, 29 CFR
1910.1200

Material Safety Data Sheet

Disclaimer

The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

Super S Multipurpose D/M Automatic Transmission Fluid
MSDS# 65257S
Version 2.0
Effective Date 06/15/2009
According to OSHA Hazard Communication Standard, 29 CFR
1910.1200

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S Multipurpose D/M Automatic Transmission Fluid

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: Not classified as dangerous for supply or conveyance.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.
Health Hazards	: Not expected to be a health hazard when used under normal conditions.
Health Hazards Inhalation	: Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact	: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact	: May cause slight irritation to eyes.
Ingestion	: Low toxicity if swallowed.
Other Information	: Used oil may contain harmful impurities.
Signs and Symptoms	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Aggravated Medical Condition	: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards	: Not classified as dangerous for the environment.
Additional Information	: Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous

Material Safety Data Sheet

Super S Multipurpose D/M Automatic Transmission Fluid
MSDS# 65257S
Version 2.0
Effective Date 06/15/2009
According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	: Not expected to be a health hazard when used under normal conditions.
Inhalation	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	: > 176.67 °C / 350.01 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	: > 320 °C / 608 °F
Specific Hazards	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	: Do not use water in a jet.
Protective Equipment for Firefighters	: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	: Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay,

Material Safety Data Sheet

Additional Advice : sand or other suitable material and dispose of properly.
: Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials : For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials : PVC.

Additional Information : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker

Material Safety Data Sheet

	health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Flash point	: > 176.67 °C / 350.01 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: Data not available
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: > 40 mm ² /s
Vapour density (air=1)	: > 1 (estimated value(s))
Evaporation rate (nBuAc=1)	: Data not available

Material Safety Data Sheet

10. STABILITY AND REACTIVITY

Stability	: Stable.
Conditions to Avoid	: Extremes of temperature and direct sunlight.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	: Expected to be slightly irritating.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation.
Sensitisation	: Not expected to be a skin sensitiser.
Repeated Dose Toxicity	: Not expected to be a hazard.
Mutagenicity	: Not considered a mutagenic hazard.
Carcinogenicity	: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	: Not expected to be a hazard.
Additional Information	: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity	: Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.
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Material Safety Data Sheet

- Mobility** : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
- Persistence/degradability** : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- Bioaccumulation** : Contains components with the potential to bioaccumulate.
- Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

- Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
- Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed.
TSCA	All components listed.
DSL	All components listed.

Material Safety Data Sheet

Super S Multipurpose D/M Automatic Transmission Fluid
MSDS# 65257S
Version 2.0
Effective Date 06/15/2009
According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

SARA Hazard Categories (311/312)
No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This product contains a chemical known to the State of California to cause cancer.
Known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity)	: 0, 1, 0
MSDS Version Number	: 2.0
MSDS Effective Date	: 06/15/2009
MSDS Revisions	: A vertical bar () in the left margin indicates an amendment from the previous version.
MSDS Regulation	: The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution	: The information in this document should be made available to all who may handle the product.
Disclaimer	: The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet**1. MATERIAL AND COMPANY IDENTIFICATION**

Material Name : SuperSyn Gear Oil 75W-140
Uses : Transmission oil.

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Refer to chapter 16 for full text of EC R-phrases.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: Not classified as dangerous for supply or conveyance.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.
Health Hazards	: Not expected to be a health hazard when used under normal conditions.
Health Hazards Inhalation	: Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact	: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact	: May cause slight irritation to eyes.
Ingestion	: Low toxicity if swallowed.
Other Information	: Used oil may contain harmful impurities.
Signs and Symptoms	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Aggravated Medical Condition	: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards	: Not classified as dangerous for the environment.
Additional Information	: Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous

Material Safety Data Sheet

chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	: Not expected to be a health hazard when used under normal conditions.
Inhalation	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	: Typical 201 °C / 394 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	: > 320 °C / 608 °F
Specific Hazards	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	: Do not use water in a jet.
Protective Equipment for Firefighters	: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	: Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay,

Material Safety Data Sheet

Additional Advice : sand or other suitable material and dispose of properly.
: Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

- General Precautions** : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : PVC.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker

Material Safety Data Sheet

	health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	: Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	: Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	: Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Pour point	: < -40 °C / -40 °F
Flash point	: Typical 201 °C / 394 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: Typical 0.920
Density :	Typical 920 kg/m ³
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: Typical 271 mm ² /s at 40 °C / 104 °F
Vapour density (air=1)	: > 1 (estimated value(s))

Material Safety Data Sheet

Evaporation rate (nBuAc=1) : Data not available

10. STABILITY AND REACTIVITY

Stability : Stable.
Conditions to Avoid : Extremes of temperature and direct sunlight.
Materials to Avoid : Strong oxidizing agents.
Hazardous Decomposition Products : Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment : Information given is based on data on the components and the toxicology of similar products.

Acute Oral Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity : Low toxicity by inhalation.
Skin Irritation : Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Eye Irritation : Expected to be slightly irritating.
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Sensitisation : Not expected to be a skin sensitiser.
Repeated Dose Toxicity : Not expected to be a hazard.
Mutagenicity : Not considered a mutagenic hazard.
Carcinogenicity : Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.

Reproductive and Developmental Toxicity : Not expected to be a hazard.
Additional Information : Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Material Safety Data Sheet

Mobility	: Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Persistence/degradability	: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation Other Adverse Effects	: Contains components with the potential to bioaccumulate. : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal	: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	: Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation	: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION**US Department of Transportation Classification (49CFR)**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status**Notification Status**

EINECS	All components listed.
TSCA	All components listed.

Material Safety Data Sheet**SARA Hazard Categories (311/312)**

No SARA 311/312 Hazards.

State Regulatory Status**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION**NFPA Rating (Health,
Fire, Reactivity)**

0, 1, 0

MSDS Version Number

2.0

MSDS Effective Date

06/24/2009

MSDS Revisions

A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulation

The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS Distribution

The information in this document should be made available to all who may handle the product.

Disclaimer

The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

Super S R&O Hydraulic Oil
MSDS# 65234S
Version 2.0
Effective Date 05/27/2009
According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S R & O Hydraulic Oil

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS No.	Concentration
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	1.00 - 5.00 %

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: Clear pale yellow. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: Not classified as dangerous for supply or conveyance.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.

Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Eye Contact : May cause slight irritation to eyes.

Ingestion : Low toxicity if swallowed.

Other Information : Used oil may contain harmful impurities.

Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this

Material Safety Data Sheet

Environmental Hazards : material: Skin.
Additional Information : Not classified as dangerous for the environment.
: Under normal conditions of use or in a foreseeable emergency,
this product does not meet the definition of a hazardous
chemical when evaluated according to the OSHA Hazard
Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information : Not expected to be a health hazard when used under normal
conditions.
Inhalation : No treatment necessary under normal conditions of use. If
symptoms persist, obtain medical advice.
Skin Contact : Remove contaminated clothing. Flush exposed area with water
and follow by washing with soap if available. If persistent
irritation occurs, obtain medical attention.
Eye Contact : Flush eye with copious quantities of water. If persistent
irritation occurs, obtain medical attention.
Ingestion : In general no treatment is necessary unless large quantities
are swallowed, however, get medical advice.
Advice to Physician : Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point : Typical 365 °C / 689 °F (COC)
Upper / lower : Typical 1 - 10 %(V)(based on mineral oil)
**Flammability or
Explosion limits**
Auto ignition temperature : > 320 °C / 608 °F
Specific Hazards : Hazardous combustion products may include: A complex
mixture of airborne solid and liquid particulates and gases
(smoke). Carbon monoxide. Unidentified organic and inorganic
compounds.
**Suitable Extinguishing
Media** : Foam, water spray or fog. Dry chemical powder, carbon
dioxide, sand or earth may be used for small fires only.
**Unsuitable Extinguishing
Media** : Do not use water in a jet.
**Protective Equipment for
Firefighters** : Proper protective equipment including breathing apparatus
must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective
equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on
disposal. Observe all relevant local and international regulations.

Protective measures : Avoid contact with skin and eyes. Use appropriate containment
to avoid environmental contamination. Prevent from spreading
or entering drains, ditches or rivers by using sand, earth, or
other appropriate barriers.

Material Safety Data Sheet

- Clean Up Methods** : Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
- Additional Advice** : Local authorities should be advised if significant spillages cannot be contained.




7. HANDLING AND STORAGE

- General Precautions** : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : PVC.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material	Source	Type	ppm	mg/m3	Notation
Distillates (petroleum)	ACGIH	TWA(Mist.)		5 mg/m3	
hydrotreated light paraffinic					
Distillates (petroleum)	ACGIH	STEL(Mist.)		10 mg/m3	
hydrotreated light paraffinic					
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

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Exposure Controls	 The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
Personal Protective Equipment	: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Respiratory Protection	: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	 Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	 Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	: Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	: Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Material Safety Data Sheet

Appearance	: Clear pale yellow. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Pour point	: Typical 0 °C / 32 °F
Flash point	: Typical 365 °C / 689 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: Typical 0.89
Density :	Typical 7.59 g/cm3
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: Typical 50 mm2/s at 40 °C / 104 °F
Vapour density (air=1)	: > 1 (estimated value(s))
Evaporation rate (nBuAc=1)	: Data not available

10. STABILITY AND REACTIVITY

Stability	: Stable.
Conditions to Avoid	: Extremes of temperature and direct sunlight.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	: Expected to be slightly irritating.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation.
Sensitisation	: Not expected to be a skin sensitiser.
Repeated Dose Toxicity	: Not expected to be a hazard.
Mutagenicity	: Not considered a mutagenic hazard.
Carcinogenicity	: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and	: Not expected to be a hazard.

Material Safety Data Sheet**Developmental Toxicity
Additional Information**

- ⚠ Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity

- ⚠ Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility

- ⚠ Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Persistence/degradability

- ⚠ Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

**Bioaccumulation
Other Adverse Effects**

- ⚠ Contains components with the potential to bioaccumulate.
- ⚠ Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS**Material Disposal**

- ⚠ Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal

- ⚠ Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation

- ⚠ Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION**US Department of Transportation Classification (49CFR)**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Material Safety Data Sheet

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed.
TSCA	All components listed.
DSL	All components listed.

SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Distillates (petroleum), hydrotreated light paraffinic (64742- Listed.
55-8)

Pennsylvania Right-To-Know Chemical List

Distillates (petroleum), hydrotreated light paraffinic (64742- Listed.
55-8)

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity)	: 0, 1, 0
MSDS Version Number	: 2.0

Material Safety Data Sheet

- MSDS Effective Date** : 05/27/2009
- MSDS Revisions** : A vertical bar (|) in the left margin indicates an amendment from the previous version.
- MSDS Regulation** : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- MSDS Distribution** : The information in this document should be made available to all who may handle the product.
- Disclaimer** : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

Super S R&O Hydraulic ISO 68

MSDS# 65235S

Version 2.0

Effective Date 05/28/2009

According to OSHA Hazard Communication Standard, 29 CFR
1910.1200

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S R&O Hydraulic ISO 68
Uses : Hydraulic oil

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: High-pressure injection under the skin may cause serious damage including local necrosis.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards
Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.

Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Eye Contact : May cause slight irritation to eyes.

Ingestion : Low toxicity if swallowed.

Other Information : High-pressure injection under the skin may cause serious damage including local necrosis. Used oil may contain harmful impurities.

Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Ingestion may result in nausea, vomiting and/or diarrhoea.

Material Safety Data Sheet

- Aggravated Medical Condition** : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
- Environmental Hazards** : Not classified as dangerous for the environment.
- Additional Information** : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

- General Information** : Not expected to be a health hazard when used under normal conditions.
- Inhalation** : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
- Skin Contact** : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
- Eye Contact** : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- Ingestion** : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
- Advice to Physician** : Treat symptomatically. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

- Flash point** : $\geq 350^{\circ}\text{C}$ / 662°F (Cleveland Open Cup)
- Upper / lower Flammability or Explosion limits** : Typical 1 - 10 % (V) (based on mineral oil)
- Auto ignition temperature** : $> 320^{\circ}\text{C}$ / 608°F
- Specific Hazards** : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

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- Suitable Extinguishing Media** : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- Unsuitable Extinguishing Media** : Do not use water in a jet.
- Protective Equipment for Firefighters** : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

- Protective measures** : Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
- Clean Up Methods** : Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
- Additional Advice** : Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

- General Precautions** : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : PVC.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
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Material Safety Data Sheet

Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls

- The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

**Personal Protective
Equipment
Respiratory Protection**

- Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].

Hand Protection

- Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection

- Wear safety glasses or full face shield if splashes are likely to occur.

Protective Clothing

- Skin protection not ordinarily required beyond standard issue work clothes.

Monitoring Methods

- Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

**Environmental Exposure
Controls**

- Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

Material Safety Data Sheet**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Pour point	: >= -20 °C / -4 °F
Flash point	: >= 350 °C / 662 °F (Cleveland Open Cup)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: >= 0.87
Density :	>= 7.5 g/cm ³ at 15 °C / 59 °F
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: Typical 114 mm ² /s at 40 °C / 104 °F
Vapour density (air=1)	: > 1 (estimated value(s))
Evaporation rate (nBuAc=1)	: Data not available

10. STABILITY AND REACTIVITY

Stability	: Stable.
Conditions to Avoid	: Extremes of temperature and direct sunlight.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	: Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	: Expected to be slightly irritating.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation.
Sensitisation	: Not expected to be a skin sensitizer.
Repeated Dose Toxicity	: Not expected to be a hazard.
Mutagenicity	: Not considered a mutagenic hazard.
Carcinogenicity	: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic

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effects.

**Reproductive and
Developmental Toxicity
Additional Information**

- : Not expected to be a hazard.
- : Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity

- : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility

- : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Persistence/degradability

- : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Bioaccumulation**Other Adverse Effects**

- : Contains components with the potential to bioaccumulate.
- : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS**Material Disposal**

- : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal

- : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation

- : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Material Safety Data Sheet

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS

All components listed or
polymer exempt.

TSCA

All components listed.

DSL

All components listed.

SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity) : 0, 1, 0

MSDS Version Number : 2.0

MSDS Effective Date : 05/28/2009

Material Safety Data Sheet

MSDS Revisions

- A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulation

- The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS Distribution

- The information in this document should be made available to all who may handle the product.

Disclaimer

- The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet**1. MATERIAL AND COMPANY IDENTIFICATION**

Material Name : Super S GEAR OIL SAE 80W-90 LS
Uses : Transmission oil.

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, La 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800- 424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Slight hydrocarbon.
Health Hazards	: Not classified as dangerous for supply or conveyance.
Safety Hazards	: Not classified as flammable but will burn.
Environmental Hazards	: Not classified as dangerous for the environment.

Health Hazards	: Not expected to be a health hazard when used under normal conditions.
Health Hazards Inhalation	: Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact	: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact	: May cause slight irritation to eyes.
Ingestion	: Low toxicity if swallowed.
Other Information	: Used oil may contain harmful impurities.
Signs and Symptoms	: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Aggravated Medical Condition	: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards	: Not classified as dangerous for the environment.
Additional Information	: Under normal conditions of use or in a foreseeable emergency,

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this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	: Not expected to be a health hazard when used under normal conditions.
Inhalation	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	: Typical 350 °C / 662 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	: > 320 °C / 608 °F
Specific Hazards	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	: Do not use water in a jet.
Protective Equipment for Firefighters	: Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	: Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an

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Additional Advice : absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
: Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials : For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials : PVC.

Additional Information : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material Source		Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne

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	concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Slight hydrocarbon.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 280 °C / 536 °F estimated value(s)
Pour point	: Typical -10 °C / 14 °F
Flash point	: Typical 350 °C / 662 °F (COC)
Upper / lower Flammability or Explosion limits	: Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	: > 320 °C / 608 °F
Vapour pressure	: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	: Typical 0.885
Density :	Typical 7.51 g/cm3
Water solubility	: Negligible.
n-octanol/water partition coefficient (log Pow)	: > 6 (based on information on similar products)
Kinematic viscosity	: Typical 400 mm2/s at 40 °C / 104 °F

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Vapour density (air=1) : > 1 (estimated value(s))
Evaporation rate (nBuAc=1) : Data not available

10. STABILITY AND REACTIVITY

Stability : Stable.
Conditions to Avoid : Extremes of temperature and direct sunlight.
Materials to Avoid : Strong oxidizing agents.
Hazardous Decomposition Products : Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment : Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity : Low toxicity by inhalation.
Skin Irritation : Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation : Expected to be slightly irritating.
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Sensitisation : Not expected to be a skin sensitiser.
Repeated Dose Toxicity : Not expected to be a hazard.
Mutagenicity : Not considered a mutagenic hazard.
Carcinogenicity : Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity : Not expected to be a hazard.
Additional Information : Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

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Mobility	:	Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Persistence/degradability	:	Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation	:	Contains components with the potential to bioaccumulate.
Other Adverse Effects	:	Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	:	Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION**US Department of Transportation Classification (49CFR)**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status**Notification Status**

DSL	All components listed.
EINECS	All components listed.
TSCA	All components listed.

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SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This product contains a chemical known to the State of California to cause cancer.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity) : 0, 1, 0

MSDS Version Number : 2.0

MSDS Effective Date : 05/14/2009

MSDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulation : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS Distribution : The information in this document should be made available to all who may handle the product.

Disclaimer : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S Universal Global Antifreeze & Coolant
Uses : Antifreeze and coolant.

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS No.	Concentration
Ethenediol	107-21-1	60.00 - 100.00 %

Mixture of ethylene glycol, water and additives.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Characteristic.
Health Hazards	: Harmful or fatal if swallowed. May cause acidosis, cardiopulmonary and kidney effects.
Environmental Hazards	: May cause long-term adverse effects in the aquatic environment.

Health Hazards

Inhalation : Slightly irritating to respiratory system.

Skin Contact : May cause moderate irritation to skin.

Eye Contact : Moderately irritating to eyes.

Ingestion : Harmful if swallowed. May cause acidosis, cardiopulmonary and kidney effects. Ingestion may cause drowsiness and dizziness.

Other Information : Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s):
Kidney.
Lungs
Cardiovascular system.
Intentional abuse, misuse or other massive exposure may cause multiple organ damage and or death.

Signs and Symptoms : Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow. Other signs and symptoms can include nausea, vomiting, abdominal cramps, diarrhoea, lumbar pain shortly after ingestion, and possibly narcosis and

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	death. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued exposure may result in unconsciousness and/or death.
Aggravated Medical Condition	: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Kidney. Cardiovascular system.
Environmental Hazards	: Not classified as dangerous for the environment.
Additional Information	: Under normal conditions of use or in a foreseeable emergency, this product meets the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	: DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.
Inhalation	: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: DO NOT DELAY. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Advice to Physician	: IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! The preferred treatment is immediate transportation to a medical facility and use of appropriate treatment including possible administration of activated charcoal, gastric lavage and or gastric aspiration. If none of the above are immediately available and a delay of more than one hour is anticipated before such medical attention can be obtained, induction of vomiting may be appropriate using IPECAC syrup (Contraindicated if there are any signs of CNS depression). This should be considered on a case by case basis following specialist advice. Specific other treatments include may include ethanol therapy, fomepizole, treatment of acidosis and haemodialysis. Seek specialist advice without delay.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	: Typical 130 °C / 266 °F (Pensky-Martens Closed Cup)
Upper / lower	: 3 - 15 % (V)
Flammability or	
Explosion limits	
Auto Ignition temperature	: > 200 °C / 392 °F
Specific Hazards	: Hazardous combustion products may include: A complex

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- mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
- Suitable Extinguishing Media** : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- Unsuitable Extinguishing Media** : Do not use water in a jet.
- Protective Equipment for Firefighters** : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

- Protective measures** : Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
- Clean Up Methods** : For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- Additional Advice** : U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Centre at (800) 424-8802. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

- General Precautions** : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

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- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : Zinc. Avoid contact with galvanized materials.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material	Source	Type	ppm	mg/m3	Notation
Ethenediol	ACGIH	Ceiling(Aerosol.)		100 mg/m3	
Ethenediol	OSHA Z1A	Ceiling	50 ppm	125 mg/m3	

- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
- Hand Protection** : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

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Eye Protection	Application of a non-perfumed moisturizer is recommended. Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Characteristic.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 100 °C / 212 °F estimated value(s)
Freezing Point	: Typical -30 °C / -22 °F
Flash point	: Typical 130 °C / 266 °F (Pensky-Martens Closed Cup)
Upper / lower Flammability or Explosion limits	: 3 - 15 %(V)
Auto-ignition temperature	: > 200 °C / 392 °F
Vapour pressure	: Data not available
Specific gravity	: Typical 1.1 at 15 °C / 59 °F
Density :	Typical 909 g/cm3 at 15 °C / 59 °F
Water solubility	: Completely Soluble.
n-octanol/water partition coefficient (log Pow)	: Data not available
Kinematic viscosity	: Typical 30 mm2/s at 40 °C / 104 °F
Vapour density (air=1)	: Data not available
Evaporation rate (nBuAc=1)	: Data not available

10. STABILITY AND REACTIVITY

Stability	: Stable.
Conditions to Avoid	: Extremes of temperature and direct sunlight.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Classified as harmful by the European Commission. There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated

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fatal dose for man is 100 millilitres (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs. Ingestion may cause drowsiness and dizziness.

Acute Dermal Toxicity : Expected to be of low toxicity: LD50 >2000 mg/kg , Rabbit
Skin Irritation : May cause moderate skin irritation (but insufficient to classify).
Eye Irritation : Moderately irritating to eyes (but insufficient to classify).
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Sensitisation : Not expected to be a skin sensitiser.
Repeated Dose Toxicity : Kidney: can cause kidney damage.
Mutagenicity : Not considered a mutagenic hazard.
Carcinogenicity : Components are not known to be associated with carcinogenic effects.

Material	Carcinogenicity Classification
Ethanediol	ACGIH Group A4: Not classifiable as a human carcinogen.
Sodium molybdate	ACGIH Group A3: Confirmed animal carcinogen with unknown relevance to humans.

Reproductive and Developmental Toxicity : Causes foetotoxicity in animals; considered to be secondary to maternal toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity : Expected to be practically non toxic: LC/EC/IC50 > 100 mg/l (to aquatic organisms)

Mobility : Dissolves in water. If product enters soil, it will be highly mobile and may contaminate groundwater.

Persistence/degradability : Readily biodegradable.

Bioaccumulation : Not expected to bioaccumulate significantly.

Other Adverse Effects : Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

Material Safety Data Sheet**US Department of Transportation Classification (49CFR)**

Identification number UN 3082
Proper shipping name Environmentally hazardous substances, liquid, n.o.s.
Technical name (Ethylene glycol)
Class / Division 9

Packing group III

IMDG

Identification number UN 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
Technical name (Ethylene glycol)
Class / Division 9
Packing group III
Marine pollutant: No

IATA (Country variations may apply)

Identification number UN 3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Technical name (Ethylene glycol)
Class / Division 9
Packing group III

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status**Notification Status**

DSL All components listed.
EINECS All components listed.
TSCA All components listed.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Super S Universal Global Antifreeze & Coolant	Reportable quantity: 5473 lbs
Ethenediol (107-21-1)	Reportable quantity: 5000 lbs

SARA Hazard Categories (311/312)

Immediate (Acute) Health Hazard.

SARA Toxic Release Inventory (TRI) (313)

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Ethanediol (107-21-1) 91.35%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Ethanediol (107-21-1) Listed.

Pennsylvania Right-To-Know Chemical List

Ethanediol (107-21-1) Environmental hazard.
Listed.

16. OTHER INFORMATION

- | | | |
|---|---|---|
| NFPA Rating (Health, Fire, Reactivity) | : | 2, 1, 0 |
| MSDS Version Number | : | 2.0 |
| MSDS Effective Date | : | 06/18/2009 |
| MSDS Revisions | : | A vertical bar () in the left margin indicates an amendment from the previous version. |
| MSDS Regulation | : | The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
| MSDS Distribution | : | The information in this document should be made available to all who may handle the product. |
| Disclaimer | : | The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product. |

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S Extended Life Antifreeze & Coolant
Uses : Antifreeze and coolant.

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS No.	Concentration
Ethanediol	107-21-1	60.00 - 100.00 %

Mixture of ethylene glycol, water and additives.

3. HAZARDS IDENTIFICATION

Emergency Overview	
Appearance and Odour	: May be dyed. Liquid at room temperature. Characteristic.
Health Hazards	: Harmful or fatal if swallowed. May cause acidosis, cardiopulmonary and kidney effects.
Environmental Hazards	: May cause long-term adverse effects in the aquatic environment.

Health Hazards

Inhalation	: Slightly irritating to respiratory system.
Skin Contact	: May cause moderate irritation to skin.
Eye Contact	: Moderately irritating to eyes.
Ingestion	: Harmful if swallowed. May cause acidosis, cardiopulmonary and kidney effects. Ingestion may cause drowsiness and dizziness.
Other Information	: Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Kidney. Lungs Cardiovascular system. Intentional abuse, misuse or other massive exposure may cause multiple organ damage and or death.
Signs and Symptoms	: Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow. Other signs and symptoms can include nausea, vomiting, abdominal cramps, diarrhoea, lumbar pain shortly after ingestion, and possibly narcosis and

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	death. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued exposure may result in unconsciousness and/or death.
Aggravated Medical Condition	: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Kidney. Cardiovascular system.
Environmental Hazards	: Not classified as dangerous for the environment.
Additional Information	: Under normal conditions of use or in a foreseeable emergency, this product meets the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	: DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.
Inhalation	: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	: DO NOT DELAY. If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Advice to Physician	: IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! The preferred treatment is immediate transportation to a medical facility and use of appropriate treatment including possible administration of activated charcoal, gastric lavage and/or gastric aspiration. If none of the above are immediately available and a delay of more than one hour is anticipated before such medical attention can be obtained, induction of vomiting may be appropriate using IPECAC syrup (Contraindicated if there are any signs of CNS depression). This should be considered on a case by case basis following specialist advice. Specific other treatments include may include ethanol therapy, fomepizole, treatment of acidosis and haemodialysis. Seek specialist advice without delay.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	: Typical 130 °C / 266 °F (Pensky-Martens Closed Cup)
Upper / lower Flammability or Explosion limits	: 3 - 15 % (V)
Auto ignition temperature	: > 200 °C / 392 °F
Specific Hazards	: Hazardous combustion products may include: A complex

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		mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	:	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	:	<p>For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.</p> <p>For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.</p>
Additional Advice	:	U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Centre at (800) 424-8802. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Handling	:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

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- Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
- Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.
- Unsuitable Materials** : Zinc. Avoid contact with galvanized materials.
- Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Occupational Exposure Limits**

Material	Source	Type	ppm	mg/m3	Notation
Ethanediol	ACGIH	Ceiling(Aerosol.)		100 mg/m3	
Ethanediol	OSHA Z1A	Ceiling	50 ppm	125 mg/m3	

- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
- Hand Protection** : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

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Eye Protection	Application of a non-perfumed moisturizer is recommended. Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: May be dyed. Liquid at room temperature.
Odour :	Characteristic.
pH :	Not applicable.
Initial Boiling Point and Boiling Range	: > 100 °C / 212 °F estimated value(s)
Freezing Point	: Typical -30 °C / -22 °F
Flash point	: Typical 130 °C / 266 °F (Pensky-Martens Closed Cup)
Upper / lower Flammability or Explosion limits	: 3 - 15 %(V)
Auto-ignition temperature	: > 200 °C / 392 °F
Vapour pressure	: Data not available
Specific gravity	: Typical 1.1 at 15 °C / 59 °F
Density :	Typical 909 g/cm3 at 15 °C / 59 °F
Water solubility	: Completely Soluble.
n-octanol/water partition coefficient (log Pow)	: Data not available
Kinematic viscosity	: Typical 30 mm2/s at 40 °C / 104 °F
Vapour density (air=1)	: Data not available
Evaporation rate (nBuAc=1)	: Data not available

10. STABILITY AND REACTIVITY

Stability	: Stable.
Conditions to Avoid	: Extremes of temperature and direct sunlight.
Materials to Avoid	: Strong oxidizing agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	: Classified as harmful by the European Commission. There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated

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fatal dose for man is 100 millilitres (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs. Ingestion may cause drowsiness and dizziness.

Acute Dermal Toxicity : Expected to be of low toxicity; LD50 >2000 mg/kg , Rabbit
Skin Irritation : May cause moderate skin irritation (but insufficient to classify).
Eye Irritation : Moderately irritating to eyes (but insufficient to classify).
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Sensitisation : Not expected to be a skin sensitiser.
Repeated Dose Toxicity : Kidney: can cause kidney damage.
Mutagenicity : Not considered a mutagenic hazard.
Carcinogenicity : Components are not known to be associated with carcinogenic effects.

Material	Carcinogenicity Classification
Ethanediol	ACGIH Group A4: Not classifiable as a human carcinogen.
Sodium molybdate	ACGIH Group A3: Confirmed animal carcinogen with unknown relevance to humans.

Reproductive and Developmental Toxicity : Causes foetotoxicity in animals; considered to be secondary to maternal toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity : Expected to be practically non toxic: LC/EC/IC50 > 100 mg/l (to aquatic organisms)

Mobility : Dissolves in water. If product enters soil, it will be highly mobile and may contaminate groundwater.

Persistence/degradability : Readily biodegradable.
Bioaccumulation : Not expected to bioaccumulate significantly.
Other Adverse Effects : Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

Material Safety Data Sheet**US Department of Transportation Classification (49CFR)**

Identification number UN 3082
Proper shipping name Environmentally hazardous substances, liquid, n.o.s.
Technical name (Ethylene glycol)
Class / Division 9

Packing group III

IMDG

Identification number UN 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
Technical name (Ethylene glycol)
Class / Division 9
Packing group III
Marine pollutant: No

IATA (Country variations may apply)

Identification number UN 3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Technical name (Ethylene glycol)
Class / Division 9
Packing group III

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status**Notification Status**

DSL All components listed.
EINECS All components listed.
TSCA All components listed.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Super S Extended Life Antifreeze & Coolant Reportable quantity: 5473 lbs

Ethenediol (107-21-1) Reportable quantity: 5000 lbs

SARA Hazard Categories (311/312)

Immediate (Acute) Health Hazard.

SARA Toxic Release Inventory (TRI) (313)

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Ethanediol (107-21-1) 91.35%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Ethanediol (107-21-1)

Listed.

Pennsylvania Right-To-Know Chemical List

Ethanediol (107-21-1)

Environmental hazard.
Listed.

16. OTHER INFORMATION

NFPA Rating (Health, : 2, 1, 0

Fire, Reactivity)
MSDS Version Number : 2.0

MSDS Effective Date : 06/18/2009

MSDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.

MSDS Regulation : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS Distribution : The information in this document should be made available to all who may handle the product.

Disclaimer : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR
1910.1200

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : Super S Mineral Spirits
Uses : Stoddard Solvent

Manufacturer/Supplier : Smitty's Supply, Inc.
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number : 800-424-9300 – toll free in the U.S., Canada, and U.S. Virgin Islands.
CHEMTREC 703-527-3887 – for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Solvents</u>	<u>CAS#</u>	<u>%</u>	<u>Agency</u>	<u>Units</u> <u>TLV</u>	<u>Type</u>
Stoddard Solvent	8052-41-3	100	ACGIH	100	TWA
			ACGIH	200	STEL
			OSHA	100	TWA

This component may contain 3.5% of

*1,2,4 Tri Methyl 95-63-6
Benzene

*SECTION 313 OF SARA TITLE III.

3. HAZARDS IDENTIFICATIONEFFECTS OF OVEREXPOSURE

EYE CONTACT: Exposure may cause mild eye irritation. Symptoms may include stinging, tearing and redness.

SKIN CONTACT: Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking and skin burns. Preexisting skin disorders may be aggravated by exposure to this material. Skin absorption is possible but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

INHALATION (BREATHING): Exposure to vapor or mist is possible. Short term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits. Symptoms of exposure may include irritation (nose, throat, respiratory tract), pre-existing lung disorders (e.g. asthma-like conditions may be aggravated by exposure to this material) and central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

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INGESTION (SWALLOWING): Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Symptoms may include gastrointestinal irritation (nausea, vomiting, diarrhea) and central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness.) This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

Emergency and First Aid Procedures

Eye Contact: Flush with water for 15 minutes. Seek medical help.

Skin Contact: Wash with mild soap and water solution and seek medical attention.

Inhalation: Remove to fresh air. Apply artificial respiration if breathing stops. Seek medical attention immediately.

Ingestion: If swallowed, do not induce vomiting. Seek medical attention immediately.

Primary Route(s) of Entry: Inhalation, skin contact and eye contact.

Effects of Chronic Exposure: Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by IARC, NTP or OSHA.

4. FIRST AID MEASURES

Inhalation: If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet and get medical attention.

Skin: Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eyes: Immediately flush thoroughly with large amounts of water, occasionally lifting upper and lower lids. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Keep person warm, quiet and get medical attention immediately. Aspiration of material into lungs due to vomiting can cause chemical pneumonitis, which can be fatal.

5. FIRE FIGHTING MEASURES

Flash Point: 100°F **Flammable Limits:** **LEL:** 0.8% **UEL:** 5.0%

Extinguishing Media: Regular foam, carbon dioxide, or dry chemical.

Special Fire Fighting Procedures: Wear self contained breathing apparatus with a full face piece operated in the positive pressure demand mode, with appropriate turn out gear & chemical resistant personal protective equipment.

Unusual Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames, sparks, heater, smoking, electric motors, static discharge or other ignition sources at locations distant from material handling point. Keep away from heat, sparks, pilot lights and other sources of ignition. Closed containers may explode when exposed to extreme heat.

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HMIS Codes:	Health: 0	Flammability: 2	Reactivity: 0
NFPA Codes:	Health: 1	Flammability: 2	Reactivity: 0

6. ACCIDENTAL RELEASE

Small Spill: Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill: Eliminate all ignition sources (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until cleanup has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product, transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent runoff to sewers, streams or other bodies of water. If runoff occurs, notify proper authorities, as required, that a spill has occurred.

Waste Disposal Method

Small Spill: Dispose of in accordance with all local, state, and federal regulations.

Large Spill: Dispose of in accordance with all applicable local, state, and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling and Storing: Keep away from heat, sparks, and open flame. Use with adequate ventilation. Keep container closed.

Other Precautions: Personnel should avoid inhalation of vapors. Personal contact with the product should be avoided. Should contact be made, remove saturated clothing and flush affected areas with water.

Other Regulatory Information: The State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop 65) develops a list of chemicals that require specific warnings relating to cancer and/or reproductive toxicity. This product contains the following chemicals subject to the reporting requirements of the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop 65).

<u>Chemical</u>	<u>CAS#</u>	<u>Quantity</u>
Toluene**	108-88-3	500 ppm
Benzene**	71-43-2	<10 ppm

The warning on the product states:

WARNING: USE OF THIS PRODUCT WILL EXPOSE YOU TO BENZENE WHICH IS KNOWN TO CAUSE CANCER AND TO TOLUENE WHICH IS KNOWN TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

**Not included in Section II as this chemical is less than .1% of the formula.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Ingredient</u>	<u>CAS No.</u>	<u>Percent by Vol.</u>	<u>OSHA PEL (PPM)</u>	<u>ACGIH TLV (PPM)</u>
Stoddard Solvent	8052-41-3	> 90	100	100
1,2,4 - Trimethylbenzene	95-63-6	< 5	25	25
1,3,5 - Trimethylbenzene	108-67-8	< 5	25	25

Section 313: Supplier Notification. This product contains the following toxic chemicals, subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right to Know Act of 1986, and of 40 CFR 372. 1,2,4 - Trimethylbenzene. This information must be included in all Material Safety Data Sheets that are copied and distributed for this material.

Respiratory Protection (Specific Type): Self-contained breathing apparatus for concentrations above TLV limits.

Ventilation

Local Exhaust: Adequate ventilation required.

Mechanical (General): Yes

Special: No smoking.

Other: N.A.

Protective Gloves: Impermeable gloves.

Eye Protection: Safety goggles.

Other Protective Equipment: It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F)	310 - 405°F	Specific Gravity (H ₂ O=1)	0.789
Vapor Pressure (mmHg)	2 mmHg	Percent Volatile	100
Vapor Density (AIR=1)	4.9	By Volume (%)	
Solubility in Water	Negligible (<5%)	Evaporation Rate	Less than 1
Appearance	Water white clear	(Ether = 1)	
Odor	Hydrocarbon type	V.O.C.	773 g/l

Flash Point (Method Used): 105°F, TCC.

Flammable Limits (%Vol):

LEL: 1.0

UEL: 6.0

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10. STABILITY AND REACTIVITY

Stability: Stable

Condition to Avoid: Heat, sparks, fire, open flame and all other sources of ignition.

Incompatibility (Materials to Avoid): Strong oxidizing agents. Strong acids or bases and selected amines.

Hazardous Decomposition Products: Thermal decomposition may yield carbon monoxide and/or CO₂.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: N.A.

11. TOXICOLOGICAL INFORMATION

Health Hazard Acute and Chronic:

Inhalation: Excessive inhalation of vapors can cause nasal and respiratory irritation, central nervous system effects including dizziness, weakness, fatigue, nausea and headache and possible unconsciousness or in extreme cases, death. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or prove fatal.

Skin: Prolonged or repeated contact can cause moderate irritation, defatting dermatitis.

Eyes: Can cause severe irritation, redness, tearing and blurred vision.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Chronic Overexposure: Excessive exposure may cause permanent brain and nervous system damage.

Medical Conditions Aggravated by Exposure: Unknown

Carcinogenicity: Not presently listed as a carcinogen. IARC – not listed; NTP – not listed; OSHA – not listed.

12. ECOLOGICAL INFORMATION

Stability: Stable

Conditions to Avoid: N/A

Incompatibility: Avoid contact with strong oxidizing agents

Hazardous Decomposition of By-Products: May form toxic materials: carbon dioxide and carbon monoxide, various hydrocarbons.

Hazardous Polymerization: Cannot occur

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13. DISPOSAL CONSIDERATIONSWaste Disposal Method:

Small Spill: Allow volatile portion to evaporate away from inhabited areas or in ventilated hood. Dispose of remaining material in accordance with applicable regulations.

Large Spill: Dispose of by sending to licensed reclaimer, or permitted incinerator in accordance with local, state and federal regulations.

Precautions to be taken in handling and storing: Store in cool, dry area. Avoid flames and high temperatures. Store upright to prevent leaks. Keep container tightly closed.

Other Precautions: None

14. TRANSPORT INFORMATION

Note: In containers of 119 gallons capacity or less, this product is not regulated by DOT.

<u>Container Size</u>	<u>Hazard Class</u>	<u>ID #</u>	<u>Packaging Group</u>
Gallon	None	None	None
Quart	None	None	None
5 Gallon Pail	None	None	None
55 Gallon Drum	None	None	None

15. REGULATORY INFORMATION

All ingredients are listed on TSCA Inventory

SARA 311/312 Hazard Categories

Health – Immediate Health, Delayed health, Fire

SARA 313 Components

1,2,4 Trimethylbenzene

California Proposition 65

Warning: this material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (benzene)

The information and recommendations contained herein have been compiled from sources believed to be accurate and reliable. The information herein is given in good faith, but no warranty, expressed or implied, is made.

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16. OTHER INFORMATION

NFPA RATING (HEALTH,
FIRE, REACTIVITY) : 0, 2, 0

MSDS VERSION NUMBER : 2.0

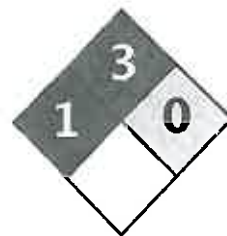
MSDS EFFECTIVE DATE : 07/10/2009

MSDS REVISIONS : A vertical bar (I) in the left margin indicates an amendment from the previous version.

MSDS REGULATION : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

MSDS DISTRIBUTION : The information in this document should be made available to all who may handle the product.

DISCLAIMER : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.



Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet Acetone MSDS

Section 1: Chemical Product and Company Identification

Product Name: Acetone

Catalog Codes: SLA3502, SLA1645, SLA3151, SLA3808

CAS#: 67-64-1

RTECS: AL3150000

TSCA: TSCA 8(b) inventory: Acetone

CI#: Not applicable.

Synonym: 2-propanone; Dimethyl Ketone;
Dimethylformaldehyde; Pyroacetic Acid

Chemical Name: Acetone

Chemical Formula: C₃H₆O

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: 1-800-901-7247

International Sales: 1-281-441-4400

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Acetone	67-64-1	100

Toxicological Data on Ingredients: Acetone: ORAL (LD50): Acute: 5800 mg/kg [Rat]. 3000 mg/kg [Mouse]. 5340 mg/kg [Rabbit]. VAPOR (LC50): Acute: 50100 mg/m 8 hours [Rat]. 44000 mg/m 4 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].

The substance is toxic to central nervous system (CNS).

The substance may be toxic to kidneys, the reproductive system, liver, skin.

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 465°C (869°F)

Flash Points: CLOSED CUP: -20°C (-4°F). OPEN CUP: -9°C (15.8°F) (Cleveland).

Flammable Limits: LOWER: 2.6% UPPER: 12.8%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of open flames and sparks, of oxidizing materials, of acids.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Vapor may travel considerable distance to source of ignition and flash back.

Special Remarks on Explosion Hazards:

Forms explosive mixtures with hydrogen peroxide, acetic acid, nitric acid, nitric acid + sulfuric acid, chromic anhydride, chromyl chloride, nitrosyl chloride, hexachloromelamine, nitrosyl perchlorate, nitryl perchlorate, permonosulfuric acid, thiodiglycol + hydrogen peroxide, potassium ter-butoxide, sulfur dichloride, 1-methyl-1,3-butadiene, bromoform, carbon, air, chloroform, thitriazylperchlorate.

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Flammable liquid.

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis.

Storage:

Store in a segregated and approved area (flammables area) . Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Keep away from direct sunlight and heat and avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 500 STEL: 750 (ppm) from ACGIH (TLV) [United States]

TWA: 750 STEL: 1000 (ppm) from OSHA (PEL) [United States]

TWA: 500 STEL: 1000 [Australia]

TWA: 1185 STEL: 2375 (mg/m³) [Australia]

TWA: 750 STEL: 1500 (ppm) [United Kingdom (UK)]

TWA: 1810 STEL: 3620 (mg/m³) [United Kingdom (UK)]

TWA: 1800 STEL: 2400 from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Fruity. Mint-like. Fragrant. Ethereal

Taste: Pungent, Sweetish

Molecular Weight: 58.08 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 56.2°C (133.2°F)

Melting Point: -95.35 (-139.6°F)

Critical Temperature: 235°C (455°F)

Specific Gravity: 0.79 (Water = 1)

Vapor Pressure: 24 kPa (@ 20°C)

Vapor Density: 2 (Air = 1)

Volatility: Not available.

Odor Threshold: 62 ppm

Water/Oil Dist. Coeff.: The product is more soluble in water; $\log(\text{oil/water}) = -0.2$

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, ignition sources, exposure to moisture, air, or water, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 3000 mg/kg [Mouse].

Acute toxicity of the vapor (LC50): 44000 mg/m³ 4 hours [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED].

Causes damage to the following organs: central nervous system (CNS).

May cause damage to the following organs: kidneys, the reproductive system, liver, skin.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenicity) based on studies with yeast (*S. cerevisiae*), bacteria, and hamster fibroblast cells. May cause reproductive effects (fertility) based upon animal studies.

May contain trace amounts of benzene and formaldehyde which may cancer and birth defects. Human: passes the placental barrier.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: May cause skin irritation. May be harmful if absorbed through the skin.

Eyes: Causes eye irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.

Inhalation: Inhalation at high concentrations affects the sense organs, brain and causes respiratory tract irritation.

It also may affect the Central Nervous System (behavior) characterized by dizziness, drowsiness, confusion, headache, muscle weakness, and possibly motor incoordination, speech abnormalities, narcotic effects and coma. Inhalation may also affect the gastrointestinal tract (nausea, vomiting).

Ingestion: May cause irritation of the digestive (gastrointestinal) tract (nausea, vomiting). It may also affect the Central Nervous System (behavior), characterized by depression, fatigue, excitement, stupor, coma, headache, altered sleep time, ataxia, tremors as well as the blood, liver, and urinary system (kidney, bladder, ureter) and endocrine system. May also have musculoskeletal effects.

Chronic Potential Health Effects:

Skin: May cause dermatitis.

Eyes: Eye irritation.

Section 12: Ecological Information

Ecotoxicity:

Ecotoxicity in water (LC50): 5540 mg/l 96 hours [Trout]. 8300 mg/l 96 hours [Bluegill]. 7500 mg/l 96 hours [Fathead Minnow]. 0.1 ppm any hours [Water flea].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Acetone UNNA: 1090 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Benzene

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Benzene

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene, Formaldehyde

Connecticut hazardous material survey.: Acetone

Illinois toxic substances disclosure to employee act: Acetone

Illinois chemical safety act: Acetone

New York release reporting list: Acetone

Rhode Island RTK hazardous substances: Acetone

Pennsylvania RTK: Acetone

Florida: Acetone

Minnesota: Acetone

Massachusetts RTK: Acetone

Massachusetts spill list: Acetone

New Jersey: Acetone

New Jersey spill list: Acetone

Louisiana spill reporting: Acetone

California List of Hazardous Substances (8 CCR 339): Acetone

TSCA 8(b) inventory: Acetone

TSCA 4(a) final test rules: Acetone

TSCA 8(a) IUR: Acetone

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R11- Highly flammable.

R36- Irritating to eyes.

S9- Keep container in a well-ventilated place.

S16- Keep away from sources of ignition - No smoking.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References:

-Material safety data sheet issued by: la Commission de la Santé et de la Sécurité du Travail du Québec.

-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.

LOLI, RTECS, HSDB databases.

Other MSDSs

Other Special Considerations: Not available.

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Last Updated: 11/06/2008 12:00 PM

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**DuPont™ SUVA® 134a Refrigerant**

Version 2.4

Revision Date 25.09.2007

Ref. 130000000349

This SDS adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product information**

Product name : DuPont™ SUVA® 134a Refrigerant

Types : ASHRAE Refrigerant number designation: R-134a

Use of the Substance/Preparation : Refrigerant

Company : Du Pont de Nemours (Nederland) B.V.
Baanhoekweg 22
NL-3313 LA Dordrecht
The Netherlands

Telephone : +31-78-630.1011

Emergency telephone : +44-(0)8456-006.640

E-mail address : sds-support@che.dupont.com

2. HAZARDS IDENTIFICATION

Rapid evaporation of the liquid may cause frostbite.
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name of the substance : 1,1,1,2-Tetrafluoroethane(R134a)

Chemical Name	CAS-No.	EC-No.	Classification	Concentration [%]
1,1,1,2-Tetrafluoroethane (R134a)	811-97-2	212-377-0		100

4. FIRST AID MEASURES

General advice : If unconscious, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.

Inhalation : Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary.

Skin contact : Wash off with warm water. Take off all contaminated clothing immediately.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.

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Notes to physician

Treatment : Do not give adrenaline or similar drugs.

5. FIRE-FIGHTING MEASURES

Specific hazards during fire fighting : pressure build-up

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Should not be released into the environment.

Methods for cleaning up : Evaporates.

7. HANDLING AND STORAGE**Handling**

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8.

Advice on protection against fire and explosion : No special protective measures against fire required.

Storage

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Store in original container.

Advice on common storage : No materials to be especially mentioned.

German storage class : 2A : Compressed, liquefied or pressurised gas

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Type Form of exposure	Control parameters	Update	Basis
1,1,1,2-Tetrafluoroethane (R134a)	811-97-2	TWA	4 240 mg/m ³ 1 000 ppm	2001	EH40 OES

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Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

- | | | |
|------------------------|---|---|
| Respiratory protection | : | For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. |
| Hand protection | : | Heat insulating gloves |
| Eye protection | : | Safety glasses |
| Hygiene measures | : | Handle in accordance with good industrial hygiene and safety practice. |

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | | |
|-----------------------------|---|--|
| Form | : | Liquefied gas, |
| Colour | : | none, |
| Odour | : | ether-like, |
| pH | : | neutral |
| Melting point/range | : | -101 - 103 °C at 1 013 hPa |
| Boiling point/boiling range | : | -26,5 °C at 1 013 hPa |
| Flash point | : | does not flash |
| Ignition temperature | : | > 750 °C |
| Upper explosion limit | : | , not applicable |
| Vapour pressure | : | 6 661 hPa at 25 °C |
| Vapour pressure | : | 13 190 hPa at 50 °C |
| Density | : | 1,21 g/cm ³ at 25 °C, (as liquid) |
| Density | : | 0,0042 g/cm ³ at 25 °C (1 013 hPa) |
| Density | : | 0,0053 g/cm ³ at -26,1 °C (1 013 hPa) |
| Water solubility | : | 1,5 g/l at 25 °C at 1 013 hPa |

10. STABILITY AND REACTIVITY

- | | | |
|---------------------|---|--|
| Conditions to avoid | : | The product is not flammable in air under ambient conditions of temperature and pressure. When pressurised with air or oxygen the mixture may become |
|---------------------|---|--|

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	flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.
Materials to avoid	Alkali metals, Alkaline earth metals, Powdered metals, Powdered metal salts
Hazardous decomposition products	Hydrogen halides, Carbon dioxide (CO ₂), Carbon monoxide, Fluorocarbons, Carbonyl halides
Hazardous reactions	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute inhalation toxicity	
• 1,1,1,2-Tetrafluoroethane (R134a)	: LC50/ 4 h/ rat : > 2 085 mg/l
Human experience	: Excessive exposures may affect human health, as follows: Inhalation Severe shortness of breath, narcosis, Irregular cardiac activity
Further information	: Cardiac sensitisation threshold limit : 312 975 mg/m ³ Anaesthetic effects threshold limit : 834 600 mg/m ³ Did not show carcinogenic or teratogenic effects in animal experiments. Concentrations substantially above the TLV value may cause narcotic effects. Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema). Rapid evaporation of the liquid may cause frostbite.

12. ECOLOGICAL INFORMATION

Toxicity to fish	
• 1,1,1,2-Tetrafluoroethane (R134a)	: LC50 / 96 h/ Oncorhynchus mykiss (rainbow trout) : 450 mg/l
Aquatic toxicity	
• 1,1,1,2-Tetrafluoroethane (R134a)	: / EC50/ 48 h/ Daphnia: 980 mg/l
Ozone depletion potential	: 0
Global warming potential (GWP)	: 1 300

13. DISPOSAL CONSIDERATIONS

Product	: Can be used after re-conditioning.
Contaminated packaging	: Empty pressure vessels should be returned to the supplier.

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14. TRANSPORT INFORMATION**ADR**

Class: 2
Classification Code: 2A
HI No.: 20
UN-Number: 3159
Labelling No.: 2.2
Proper shipping name: 1,1,1,2-Tetrafluoroethane

IATA_C

Class: 2.2
UN-Number: 3159
Labelling No.: 2.2
Proper shipping name: 1,1,1,2-Tetrafluoroethane

IMDG

Class: 2.2
UN-Number: 3159
Labelling No.: 2.2
Proper shipping name: 1,1,1,2-Tetrafluoroethane

15. REGULATORY INFORMATION**Labelling according to EC Directives**

Special labelling of certain preparations : Contains fluorinated greenhouse gas covered by the Kyoto Protocol.

The product does not need to be labelled in accordance with EC directives or respective national laws.

16. OTHER INFORMATION**Further information**

Before use read DuPont's safety information., For further information contact the local DuPont office or DuPont's nominated distributors., ® DuPont's registered trademark

Significant change from previous version is denoted with a double bar.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.

Attachment 9.6
Soil Boring Logs

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-1**
Total Depth: **8.0 ft.**

Date Completed: **11/5/2009**

Proj Name: **City of Jackson**
Proj Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **SQS**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **N/A**
Type: **N/A**
Screen Length: **N/A**
Well Depth: **N/A**

GW Depth (▼): **N/A**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	2.0'	Brown and dark brown SAND, fine to medium grained, w/gravel & brick debris	0.0	
0.5'	2.0'	Light brown and brown CLAYEY SAND (slightly clayey), fine to medium grained, w/trace gravel	0.0	
2.0'	8.0'	Brown and gray SILTY CLAY, very silty, mottled, moist lens @ 7.5', w/gravel	0.0	
		END OF BORING		
		*Soil sample taken from 1.0' - 2.0' bgs.		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-2**
Total Depth: **8.0 ft.**

Date Completed: **11/5/2009**

Proj. Name: **City of Jackson**
Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **SQS**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **7.5 feet**

GW Depth (▼): **~ 7 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	6.0'	Brown and black SAND, fine to coarse grained, w/black debris, brick debris, and some gravel	0.0	
6.0'	8.0'	Brown and gray SILTY CLAY, mottled, brittle, w/gravel	0.0	
		END OF BORING		
		*Soil sample taken from 2.0' - 3.0' bgs.		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-3**
Total Depth: **6.0 ft.**

Date Completed: **11/5/2009**

Proj Name: **City of Jackson**
Proj Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ASTI**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **NA**
Type: **NA**
Screen Length: **NA**
Well Depth: **NA**

GW Depth (▼): **NA**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	1.0'	Concrete debris	N/A	
1.0'	1.25'	Gray SAND and GRAVEL, fine to medium grained	0.0	
1.25'	3.5'	Brown SAND, medium grained	0.6	
3.5'	4.0'	Brown SAND, medium grained, w/some light gray sand, black stain @ 3.5'	0.0	
4.0'	6.0'	No Recovery (refusal @ 6.0')	N/A	
		END OF BORING		
		*Soil sample taken from 2.0' - 4.0' bgs		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-4**
Total Depth: **8.0 ft.**

Date Completed: **11/5/2009**

Proj Name: **City of Jackson**
Proj Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ASTI**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **NA**
Type: **NA**
Screen Length: **NA**
Well Depth: **NA**

GW Depth (▼): **NA**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	1.0'	Concrete debris	N/A	
1.0'	1.25'	Gray SAND, fine to medium grained, w/gravel	0.0	
1.25'	3.5'	Brown SAND, medium grained	0.8	
3.5'	4.5'	Brown and black SAND, medium to coarse grained, w/brick debris, possible coal debris, and gravel	2.7	
4.5'	6.0'	BRICK DEBRIS, w/some brown, medium grained sand	0.0	
6.0'	8.0'	Brown SAND, fine grained, w/gravel	2.5	
		END OF BORING		
		*Soil sample taken from 2.5' - 4.5' bgs		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-GW-GP-6**
Total Depth: **12.0 ft.**

Date Completed: **11/5/2009**

Proj. Name: **City of Jackson**
Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ASTI**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5-feet**
Well Depth: **8.5 feet**

GW Depth (▼): **~8 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	1.0'	Concrete debris	N/A	
1.0'	2.5'	Brown SAND, fine to medium grained	0.0	
2.5'	4.0'	Dark brown SAND, fine to medium, w/possible coal debris, brick debris, and gravel	0.0	
4.0'	8.0'	BRICK DEBRIS and GRAVEL, w/some brown and dark brown, medium to coarse grained sand	0.0	
8.0'	9.5'	Brown CLAYEY SAND, medium to coarse grained, saturated	0.0	▼
9.5'	11.0'	Brown, gray, and blue-gray SANDY CLAY, mottled, moist, w/gravel	0.0	
11.0'	12.0'	Brown and gray SANDY CLAY, mottled, moist	0.0	
END OF BORING				
*Groundwater sample taken from temporary monitor well				

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-GW-GP-7**
Total Depth: **16.0 ft.**

Date Completed: **11/5/2009**

Proj. Name: **City of Jackson**

Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street
Jackson, Michigan**

Drilled by: **ASTI**

Method: **Geoprobe**

Geologist: **Matt Ramsey**

MW Data

Size: **NA**
Type: **NA**
Screen Length: **NA**
Well Depth: **NA**

GW Depth (▼): **N/A**

Depth		Description	PID (ppm)	GW
From	To			
0	0.33'	Concrete	N/A	
0.33'	1.0'	Concrete debris	N/A	
1.0'	2.75'	Black and brown CLAYEY SAND, medium grained, w/brick and concrete debris	0.0	
2.75'	4.0'	Black and brown CLAYEY SAND, medium grained, w/brick debris	0.0	
4.0'	4.5'	Black SAND, coarse grained, w/possible coal debris	0.0	
4.5'	5.0'	Brown CLAYEY SAND, fine to medium grained, w/gravel	0.0	
5.0'	5.5'	Red-brown SAND, fine to medium grained	0.0	
5.5'	7.0'	Black SAND, fine to medium grained, w/possible coal debris, trace gravel, moist, slightly clayey 6.5' to 7.0'	0.0	
7.0'	8.0'	Gray and black SILTY CLAY, mottled, moist	0.0	
8.0'	12.0'	Gray and brown SILTY CLAY, mottled, fractured, dry	0.0	
12.0'	16.0'	No Recovery	N/A	
		END OF BORING		
		*Soil sample taken from 11.0' - 12.0' bgs		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-GW-GP-8**
Total Depth: **16.0 ft.**

Date Completed: **11/5/2009**

Proj Name: **City of Jackson**
Proj Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ASTI**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **11 feet**

GW Depth (▼): **~10 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.17'	Asphalt	N/A	
0.17'	0.5'	Asphalt debris	N/A	
0.5'	2.0'	Red-brown, dark brown, SAND, fine to medium grained, slightly clayey, w/possible coal debris	0.0	
2.0'	2.5'	Orange-brown SILT	0.0	
2.5'	3.5'	Red-brown, dark brown, SAND, fine to medium grained, slightly clayey, w/possible coal debris	0.0	
3.5'	3.75'	Brown and light brown SILTY CLAY, mottled	0.0	
3.75'	4.0'	Brown SAND, medium grained	0.0	
4.0'	6.0'	Brown and gray, CLAYEY SAND, slightly clayey, slight petroleum odor	1.4	
6.0'	9.0'	Brown, gray, and black SILTY CLAY	0.0	
9.0'	10.0'	Brown, gray, and black SILTY CLAY, strong petroleum odor	25.6	
10.0'	11.0'	Gray and dark gray SAND, fine to medium grained, moist to wet, very strong petroleum odor	1,577	▼
11.0'	11.5'	Light gray SAND, fine grained, wet, strong petroleum odor	197	
11.5'	12.0'	Gray SILTY CLAY, wet, slight odor	55.0	
12.0'	16.0'	Poor recover (mostly gray saturated sand w/odor)	N/A	
		END OF BORING		
		*Groundwater sample taken from temporary monitor well		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-GW-GP-9**
Total Depth: **12.0 ft.**

Date Completed: **11/5/2009**

Proj. Name: **City of Jackson**
Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ASTI**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **9 feet**

GW Depth (▼): **~4 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.17'	Asphalt	N/A	
0.17'	1.0'	Asphalt/concrete debris	N/A	
1.0'	3.5'	Brown SAND, medium to coarse grained	0.0	
3.5'	4.0'	Brown, dark brown, and black CLAYEY SAND, slightly clayey, medium to coarse grained, w/asphalt debris	0.0	
4.0'	5.0'	Red-brown SAND, medium to coarse grained, moist to saturated, w/gravel	0.0	▼
5.0'	7.0'	Brown and gray SAND, medium grained, saturated	0.0	
7.0'	8.0'	Brown, gray, and black CLAYEY SAND, medium to coarse grained, moist to saturated, petroleum odor	10.8	
8.0'	10.0'	Red-brown SAND, medium to coarse grained, saturated	4.0	
10.0'	11.5'	Gray CLAYEY SAND, fine to medium grained, saturated, strong petroleum odor	1,808	
11.5'	12.0'	Gray SILTY CLAY, wet, w/some gray, coarse grained sand and gravel, petroleum odor	25.6	
END OF BORING				
*Groundwater sample taken from temporary monitor well				

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-10**
Total Depth: **12.0 ft.**

Date Completed: **12/15/2009**

Proj. Name: **Jackson, MI**
Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ERG**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **12 feet**

GW Depth (▼): **~ 8.0 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.17'	Asphalt	N/A	
0.17'	0.5'	Asphalt debris	0.0	
0.5'	0.75'	Dark brown SAND, medium grained, w/gravel	0.0	
0.75'	2.5'	Light brown, brown, and black, SAND, fine to medium grained, w/some coal and some brick debris	0.0	
2.5'	2.75'	Coal Debris	0.0	
2.75'	4.0'	GRAVEL and COBBLES w/some gray, fine silty sand	0.0	
4.0'	4.5'	Light brown SAND, medium to coarse grained, w/gravel	0.0	
4.5'	5.0'	Black SAND and GRAVEL, coarse grained	0.0	
5.0'	5.75'	Brown and dark brown SANDY CLAY, mottled	0.0	
5.75'	8.0'	Brown, dark brown, and gray SAND, fine to medium grained, slightly mottled and slightly clayey	0.0	
8.0'	9.75'	Brown CLAYEY SAND, saturated, w/gravel	0.0	▼
9.75'	11.5'	Gray and dark gray SILTY/SANDY CLAY, mottled, moist to wet	0.0	
11.5'	12.0'	Gray SAND, medium to coarse grained, saturated, slight odor	0.0	
END OF BORING				
*Groundwater sample taken from temporary monitor well				

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-11**
Total Depth: **12.0 ft.**

Date Completed: **12/15/2009**

Proj. Name: **Jackson, MI**
Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ERG**
Method: **Geoprobe**
Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **12 feet**

GW Depth (▼): **~ 8.0 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.25'	Concrete	N/A	
0.25'	0.5'	Concrete debris	0.0	
0.5'	4.0'	Brown SAND, fine to medium grained, w/trace gravel	0.0	
4.0'	8.0'	Poor Recovery - mostly gravel and fine to medium grained, brown sand	0.0	
8.0'	10.0'	Brown and dark gray CLAYEY SAND, fine grained, soft, wet	0.0	▼
10.0'	11.0'	Gray and light brown SANDY CLAY, slightly mottled	0.0	
11.0'	12.0'	CLAYEY SAND, medium to coarse grained, wet	0.0	
		END OF BORING		
		*Groundwater sample taken from temporary monitor well		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-12**
Total Depth: **12.0 ft.**

Date Completed: **12/15/2009**

Proj. Name: **Jackson, MI**

Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street**
Jackson, Michigan

Drilled by: **ERG**

Method: **Geoprobe**

Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **12 feet**

GW Depth (▼): **~ 8.0 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.17'	Asphalt	N/A	
0.17'	0.5'	Asphalt debris	0.0	
0.5'	4.0'	Brown SAND, fine to medium grained	0.0	
4.0'	6.0'	Brown SAND, fine to medium grained, moist to wet	0.0	
6.0'	6.25'	Black SAND and GRAVEL, coarse grained, petroleum odor	3.9	
6.25'	8.0'	Brown-gray, gray, and dark gray SANDY CLAY, mottled, petroleum odor	27.4	
8.0'	11.0'	Brown-gray, gray, and dark gray SANDY CLAY, mottled, wet to saturated, very strong petroleum odor	N/A	▼
11.0'	12.0'	Black SILTY CLAY, moist, petroleum odor	15.5	
		END OF BORING		
		*Groundwater sample taken from temporary monitor well *Soil sample taken from 7.0' - 8.0' bgs.		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

ASTI Environmental
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Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-13**
Total Depth: **12.0 ft.**

Date Completed: **12/15/2009**

Proj. Name: **Jackson, MI**

Proj. Number: **6715-15**

Site Address: **546 N. Mechanic Street
Jackson, Michigan**

Drilled by: **ERG**

Method: **Geoprobe**

Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **10 feet**

GW Depth (▼): **~ 9.0 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.25'	Concrete	N/A	
0.25'	0.5'	Concrete debris	N/A	
0.5'	5.0'	Brown SAND, medium to coarse grained, w/gravel and cobbles	0.0	
5.0'	6.5'	Dark brown and black CLAYEY SAND, medium to coarse grained, w/trace coal and brick debris	0.0	
6.5'	7.5'	Brown SAND, medium grained, moist	0.0	
7.5'	9.0'	Brown CLAYEY SAND, medium grained, moist to wet	0.0	
9.0'	11.5'	Brown CLAYEY SAND, medium grained, wet to saturated	0.0	▼
11.5'	12.0'	Gray, brown, and light brown SILTY SAND, brittle	0.0	
		END OF BORING		
		*Groundwater sample taken from temporary monitor well		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

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660 Cascade West Pkwy. Suite 210
Grand Rapids, MI 49546

SOIL BORING LOG

Boring Data

Boring ID: **PA-SB-GP-14**
Total Depth: **12.0 ft.**

Date Completed: **12/15/2009**

Proj Name: **Jackson, MI**

Proj Number: **6715-15**

Site Address: **546 N. Mechanic Street
Jackson, Michigan**

Drilled by: **ERG**

Method: **Geoprobe**

Geologist: **Matt Ramsey**

MW Data

Size: **1-inch**
Type: **PVC**
Screen Length: **5 feet**
Well Depth: **8.5 feet**

GW Depth (▼): **~ 8.0 feet**

Depth		Description	PID (ppm)	GW
From	To			
0	0.17'	Asphalt	N/A	
0.17'	0.5'	Asphalt debris	0.0	
0.5'	3.0'	Dark brown SAND, fine to medium grained, slightly clayey, w/gravel and trace coal debris	0.0	
3.0'	4.0'	Brown and light brown CLAYEY SAND, medium to coarse, w/coal debris	0.0	
4.0'	6.5'	Dark brown SAND, fine to medium grained, slightly clayey, w/gravel	0.0	
6.5'	7.5'	Dark brown SAND, fine grained, moist to wet	0.0	
7.5'	8.0'	Gray and brown SAND, fine to medium grained, slightly clayey	0.0	
8.0'	10.0'	CLAYEY SAND, fine to coarse grained, wet w/gravel	0.0	▼
10.0'	10.25'	Gravel	0.0	
10.25'	11.0'	Gray SAND and GRAVEL, fine to coarse grained, wet to saturated	0.0	
11.0'	12.0	Gray SAND and GRAVEL, fine to coarse grained	0.0	
		END OF BORING		
		*Groundwater sample taken from temporary monitor well		

ppm = parts per million

MW = monitoring well

TW = temporary monitoring well

bgs = below ground surface

Attachment 9.7

Analytical Results – Groundwater Samples



Brighton Analytical, L.L.C.
2105 Pless Drive
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Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: 6048
BA Sample ID: BS08346

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-9

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	4	ug/L	3	EPA 200.8 rev5.4	GW	11/10/2009
Volatile Analysis						
Acetone	Not detected	ug/L	20	SW846 8260B	CW	11/4/2009
Acrylonitrile	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Benzene	5	ug/L	1	SW846 8260B	CW	11/4/2009
Bromobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Bromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Bromodichloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Bromoform	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Bromomethane(Methyl Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
2-Butanone (MEK)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
Carbon disulfide	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Chlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Chloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Chloroform	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Chloromethane(Methyl Chloride)	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Cyclohexane	Not detected	ug/L	10	SW846 8260B	CW	11/4/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Dibromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Dibromomethane(Methylene Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: 6048
BA Sample ID: BS08346

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-9

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Diethyl ether	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
Diisopropyl Ether(DIPE)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
Ethyl benzene	110	ug/L	1	SW846 8260B	CW	11/4/2009
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
Isopropylbenzene	15	ug/L	1	SW846 8260B	CW	11/4/2009
Methyl iodide(Iodomethane)	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
Methylene chloride	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
2-Methylnaphthalene	15	ug/L	5	SW846 8260B	CW	11/4/2009
Naphthalene	59	ug/L	5	SW846 8260B	CW	11/4/2009
n-Butylbenzene	17	ug/L	1	SW846 8260B	CW	11/4/2009
n-Propylbenzene	29	ug/L	1	SW846 8260B	CW	11/4/2009
p-Isopropyl Toluene(p-Cymene)	3	ug/L	1	SW846 8260B	CW	11/4/2009
sec-Butylbenzene	3	ug/L	1	SW846 8260B	CW	11/4/2009
Styrene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
tertiaryAmylmethylether(TAME)	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
tertiaryButylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Tetrachloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Tetrahydrofuran(THF)	10	ug/L	5	SW846 8260B	CW	11/4/2009
Toluene	34	ug/L	1	SW846 8260B	CW	11/4/2009
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08346

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-9

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/4/2009
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Trichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2,3-Trichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
1,2,3-Trimethylbenzene	90	ug/L	1	SW846 8260B	CW	11/4/2009
1,2,4-Trimethylbenzene	210	ug/L	1	SW846 8260B	CW	11/4/2009
1,3,5-Trimethylbenzene	67	ug/L	1	SW846 8260B	CW	11/4/2009
Vinyl chloride	Not detected	ug/L	1	SW846 8260B	CW	11/4/2009
Xylenes(total)	410	ug/L	3	SW846 8260B	CW	11/4/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

[Signature]
11/16/09



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: 6048
BA Sample ID: BS08347

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-8

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	15	ug/L	3	EPA 200.8 rev5.4	GW	11/10/2009
Volatile Analysis						
Acetone	Not detected	ug/L	1000	SW846 8260B	CW	11/4/2009
Acrylonitrile	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Benzene	300	ug/L	50	SW846 8260B	CW	11/4/2009
Bromobenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Bromochloromethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Bromodichloromethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Bromoform	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Bromomethane(Methyl Bromide)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
2-Butanone (MEK)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Carbon disulfide	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Carbon tetrachloride	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Chlorobenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Chloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Chloroform	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Chloromethane(Methyl Chloride)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
cis-1,2-Dichloroethene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
cis-1,3-Dichloropropene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Cyclohexane	Not detected	ug/L	500	SW846 8260B	CW	11/4/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Dibromochloromethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2-Dibromoethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Dibromomethane(Methylene Bromide)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2-Dichlorobenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,3-Dichlorobenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,4-Dichlorobenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Dichlorodifluoromethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,1-Dichloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009

To: Applied Science and Technology

660 Cascade West Parkway, SE

Suite 210

Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009BA Report Number: **6048**
BA Sample ID: **BS08347**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-GW-GP-8**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,2-Dichloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,1-Dichloroethene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2-Dichloropropane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Diethyl ether	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Diisopropyl Ether(DIPE)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Ethyl benzene	1400	ug/L	50	SW846 8260B	CW	11/4/2009
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Isopropylbenzene	190	ug/L	50	SW846 8260B	CW	11/4/2009
Methyl iodide(Iodomethane)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Methylene chloride	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
2-Methylnaphthalene	360	ug/L	250	SW846 8260B	CW	11/4/2009
Naphthalene	680	ug/L	250	SW846 8260B	CW	11/4/2009
n-Butylbenzene	100	ug/L	50	SW846 8260B	CW	11/4/2009
n-Propylbenzene	240	ug/L	50	SW846 8260B	CW	11/4/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
sec-Butylbenzene	57	ug/L	50	SW846 8260B	CW	11/4/2009
Styrene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	2500	SW846 8260B	CW	11/4/2009
tertiaryAmylmeylether(TAME)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
tertiaryButylbenzene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Tetrachloroethene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Tetrahydrofuran(THF)	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
Toluene	81	ug/L	50	SW846 8260B	CW	11/4/2009
trans-1,2-Dichloroethene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
trans-1,3-Dichloropropene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2,3-Trichlorobenzene	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08347

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-8

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,2,4-Trichlorobenzene	Not detected	ug/L	250	SW846 8260B	CW	11/4/2009
1,1,1-Trichloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,1,2-Trichloroethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Trichloroethene	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Trichlorofluoromethane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2,3-Trichloropropane	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
1,2,3-Trimethylbenzene	1200	ug/L	50	SW846 8260B	CW	11/4/2009
1,2,4-Trimethylbenzene	470	ug/L	50	SW846 8260B	CW	11/4/2009
1,3,5-Trimethylbenzene	660	ug/L	50	SW846 8260B	CW	11/4/2009
Vinyl chloride	Not detected	ug/L	50	SW846 8260B	CW	11/4/2009
Xylenes(total)	2800	ug/L	150	SW846 8260B	CW	11/4/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

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11/16/09

Elevated volatile dl due to sample matrix.



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Sample Date: 11/5/2009

Submit Date: 11/6/2009

Report Date: 11/13/2009

To: Applied Science and Technology

660 Cascade West Parkway, SE

Suite 210

Grand Rapids, MI 49546

BA Report Number: 6048

BA Sample ID: BS08354

Project Name: 546 N. Mechanic

Project Number: 6715-15

Sample ID: PA-GW-GP-6

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Arsenic	3	ug/L	1	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Barium	Not detected	ug/L	100	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Cadmium	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Chromium	9	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Copper	Not detected	ug/L	4	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Lead	17	ug/L	3	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Mercury	Not detected	ug/L	0.2	EPA 245.1	KW	11/10/2009
Dissolved Selenium	Not detected	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Silver	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Zinc	Not detected	ug/L	10	EPA 200.8 rev5.4	GW	11/10/2009
Mercury (digestion)	Digested			7470	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	7	ug/L	5	EPA 335.4R1.0	RM	11/10/2009
Volatile Analysis						
Acetone	Not detected	ug/L	20	SW846 8260B	CW	11/12/2009
Acrylonitrile	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Benzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromodichloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromoform	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromomethane(Methyl Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
2-Butanone (MEK)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Carbon disulfide	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08354**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-GW-GP-6**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Chloroform	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chloromethane(Methyl Chloride)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Cyclohexane	Not detected	ug/L	10	SW846 8260B	CW	11/12/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dibromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dibromomethane(Methylene Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Diethyl ether	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Diisopropyl Ether(DIPE)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Ethyl benzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Methyl iodide(Iodomethane)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Methylene chloride	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
n-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08354Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-6

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
sec-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Styrene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	50	SW846 8260B	CW	11/12/2009
tertiaryAmylmethylether(TAME)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
tertiaryButylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tetrachloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tetrahydrofuran(THF)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Toluene	2	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Trichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Vinyl chloride	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	11/12/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: 6048
BA Sample ID: BS08355

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-6 MS

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Arsenic	93%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Barium	100%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Cadmium	97%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Chromium	99%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Copper	99%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Lead	100%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Mercury	102%	ug/L		EPA 245.1	KW	11/10/2009
Dissolved Selenium	95%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Silver	96%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Zinc	97%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Mercury (digestion)	Digested			7470	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	96%	ug/L		EPA 335.4R1.0	RM	11/10/2009
Volatile Analysis						
Carbon tetrachloride	79	%		SW846 8260B	CW	11/10/2009
Chlorobenzene	113	%		SW846 8260B	CW	11/10/2009
Chloroform	94	%		SW846 8260B	CW	11/10/2009
cis-1,3-Dichloropropene	84	%		SW846 8260B	CW	11/10/2009
Dibromochloromethane	89	%		SW846 8260B	CW	11/10/2009
1,2-Dichlorobenzene	89	%		SW846 8260B	CW	11/10/2009
1,3-Dichlorobenzene	88	%		SW846 8260B	CW	11/10/2009
1,4-Dichlorobenzene	89	%		SW846 8260B	CW	11/10/2009
1,1-Dichloroethane	90	%		SW846 8260B	CW	11/10/2009
1,2-Dichloroethane	90	%		SW846 8260B	CW	11/10/2009
1,1-Dichloroethene	91	%		SW846 8260B	CW	11/10/2009
1,2-Dichloropropane	84	%		SW846 8260B	CW	11/10/2009
Tetrachloroethane	79	%		SW846 8260B	CW	11/10/2009



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: 6048
BA Sample ID: BS08355

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-6 MS

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1,2,2-Tetrachloroethane	84	%		SW846 8260B	CW	11/10/2009
1,1,2-Trichloroethane	81	%		SW846 8260B	CW	11/10/2009
Trichloroethene	84	%		SW846 8260B	CW	11/10/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

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11/16/09

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009BA Report Number: **6048**
BA Sample ID: **BS08356**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-GW-GP-6 MSD**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Arsenic	95%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Barium	97%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Cadmium	93%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Chromium	100%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Copper	100%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Lead	95%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Mercury	98%	ug/L		EPA 245.1	KW	11/10/2009
Dissolved Selenium	94%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Silver	95%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Zinc	97%	ug/L		EPA 200.8 rev5.4	GW	11/10/2009
Mercury (digestion)	Digested			7470	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	96%	ug/L		EPA 335.4R1.0	RM	11/10/2009
Volatile Analysis						
Carbon tetrachloride	68	%		SW846 8260B	CW	11/10/2009
Chlorobenzene	105	%		SW846 8260B	CW	11/10/2009
Chloroform	85	%		SW846 8260B	CW	11/10/2009
cis-1,3-Dichloropropene	75	%		SW846 8260B	CW	11/10/2009
Dibromochloromethane	80	%		SW846 8260B	CW	11/10/2009
1,2-Dichlorobenzene	81	%		SW846 8260B	CW	11/10/2009
1,3-Dichlorobenzene	80	%		SW846 8260B	CW	11/10/2009
1,4-Dichlorobenzene	81	%		SW846 8260B	CW	11/10/2009
1,1-Dichloroethane	81	%		SW846 8260B	CW	11/10/2009
1,2-Dichloroethane	85	%		SW846 8260B	CW	11/10/2009
1,1-Dichloroethene	84	%		SW846 8260B	CW	11/10/2009
1,2-Dichloropropane	75	%		SW846 8260B	CW	11/10/2009
Tetrachloroethane	72	%		SW846 8260B	CW	11/10/2009
1,1,2,2-Tetrachloroethane	73	%		SW846 8260B	CW	11/10/2009



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

BA Report Number: **6048**
BA Sample ID: **BS08356**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-GW-GP-6 MSD**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1,2-Trichloroethane	75	%		SW846 8260B	CW	11/10/2009
Trichloroethene	74	%		SW846 8260B	CW	11/10/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

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Date:

[Signature]
11/16/09

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08357Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Duplicate

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Arsenic	2	ug/L	1	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Barium	Not detected	ug/L	100	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Cadmium	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Chromium	5	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Copper	Not detected	ug/L	4	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Lead	5	ug/L	3	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Mercury	Not detected	ug/L	0.2	EPA 245.1	KW	11/10/2009
Dissolved Selenium	Not detected	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Silver	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Zinc	Not detected	ug/L	10	EPA 200.8 rev5.4	GW	11/10/2009
Mercury (digestion)	Digested			7470	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	8	ug/L	5	EPA 335.4R1.0	RM	11/10/2009
Volatile Analysis						
Acetone	Not detected	ug/L	20	SW846 8260B	CW	11/12/2009
Acrylonitrile	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Benzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromodichloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromoform	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Bromomethane(Methyl Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
2-Butanone (MEK)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Carbon disulfide	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Chloroform	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08357**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Duplicate**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Chloromethane(Methyl Chloride)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Cyclohexane	Not detected	ug/L	10	SW846 8260B	CW	11/12/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dibromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dibromomethane(Methylene Bromide)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Diethyl ether	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Diisopropyl Ether(DIPE)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Ethyl benzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Methyl iodide(Iodomethane)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Methylene chloride	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
n-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
sec-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08357

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Duplicate

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Styrene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	50	SW846 8260B	CW	11/12/2009
tertiaryAmylmethylether(TAME)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
tertiaryButylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tetrachloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Tetrahydrofuran(THF)	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
Toluene	3	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	11/12/2009
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Trichloroethene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trichloropropane	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Vinyl chloride	Not detected	ug/L	1	SW846 8260B	CW	11/12/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	11/12/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

Uptown
11/16/09

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08359

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Trip Blank

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Volatile Analysis						
Acetone	Not detected	ug/L	20	SW846 8260B	CW	5/1/2010
Acrylonitrile	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Benzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromodichloromethane	3	ug/L	1	SW846 8260B	CW	5/1/2010
Bromoform	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromomethane(Methyl Bromide)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
2-Butanone (MEK)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Carbon disulfide	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chloroform	1	ug/L	1	SW846 8260B	CW	5/1/2010
Chloromethane(Methyl Chloride)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Cyclohexane	Not detected	ug/L	10	SW846 8260B	CW	5/1/2010
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dibromochloromethane	1	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dibromomethane(Methylene Bromide)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08359Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Trip Blank

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Diethyl ether	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Diisopropyl Ether(DIPE)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Ethyl benzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Methyl iodide(Iodomethane)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Methylene chloride	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
n-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
sec-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Styrene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	50	SW846 8260B	CW	5/1/2010
tertiaryAmylmethylether(TAME)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
tertiaryButylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tetrachloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tetrahydrofuran(THF)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Toluene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010



Brighton Analytical, L.L.C.
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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08359

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Trip Blank

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Trichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trichloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Vinyl chloride	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	5/1/2010

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

[Signature]
11/16/09

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08360**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Equipment Blank**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Arsenic	Not detected	ug/L	1	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Barium	Not detected	ug/L	100	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Cadmium	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Chromium	Not detected	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Copper	Not detected	ug/L	4	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Lead	Not detected	ug/L	3	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Mercury	Not detected	ug/L	0.2	EPA 245.1	KW	11/10/2009
Dissolved Selenium	Not detected	ug/L	5	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Silver	Not detected	ug/L	0.2	EPA 200.8 rev5.4	GW	11/10/2009
Dissolved Zinc	Not detected	ug/L	10	EPA 200.8 rev5.4	GW	11/10/2009
Mercury (digestion)	Digested			7470	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	Not detected	ug/L	5	EPA 335.4R1.0	RM	11/10/2009
Volatile Analysis						
Acetone	Not detected	ug/L	20	SW846 8260B	CW	5/1/2010
Acrylonitrile	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Benzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromochloromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromodichloromethane	3	ug/L	1	SW846 8260B	CW	5/1/2010
Bromoform	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Bromomethane(Methyl Bromide)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
2-Butanone (MEK)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Carbon disulfide	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Carbon tetrachloride	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Chloroform	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: **6048**
BA Sample ID: **BS08360**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Equipment Blank**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Chloromethane(Methyl Chloride)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Cyclohexane	Not detected	ug/L	10	SW846 8260B	CW	5/1/2010
1,2-Dibromo-3-Chloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dibromochloromethane	1	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dibromomethane(Methylene Bromide)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,3-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,4-Dichlorobenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Dichlorodifluoromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2-Dichloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Diethyl ether	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Diisopropyl Ether(DIPE)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Ethyl benzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Ethyltertiarybutylether(ETBE)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Methyl iodide(Iodomethane)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Methyl(tert)butyl ether(MTBE)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
4-Methyl-2-pentanone(MIBK)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Methylene chloride	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
n-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
sec-Butylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/12/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08360**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Equipment Blank**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Styrene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tertiary Butyl Alcohol(TBA)	Not detected	ug/L	50	SW846 8260B	CW	5/1/2010
tertiaryAmylmethylether(TAME)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
tertiaryButylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tetrachloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Tetrahydrofuran(THF)	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
Toluene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW846 8260B	CW	5/1/2010
1,1,1-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,1,2-Trichloroethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Trichloroethene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Trichlorofluoromethane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trichloropropane	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Vinyl chloride	Not detected	ug/L	1	SW846 8260B	CW	5/1/2010
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	5/1/2010

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/12/09



Brighton Analytical, L.L.C.TM

2105 Pless Drive
Brighton, MI 48114
Phone: 810-229-7575
Fax: 810-229-8650

COMPANY NAME: ASTI Environmental

PROJECT NAME: 546 N: Mechanical

PROJECT NUMBER: 6715-15

P. O. NUMBER:

REQUESTED TURNAROUND: (circle one)
Rush: 1-3 business days (verify with lab & specify date needed)
Expedited: 5 business days
Standard: 10 business days

Brighton ID #

Sample Description

If RUSH, approved by:

Sampling Time Date

VOA'S (PRES)

N

HDPE UNPRESERVED

HDPE HNO₃

HDPE H₂SO₄

HDPE NaOH

GLASS H₂SO₄

GLASS, NO PRESERVATIVE

MEOH Preserved: (Lab Preserved)

Container Type & Quantity

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

BA PROJECT #:

ABBREVIATIONS FOR MATRIX
S = Solid
L = Liquid
DW = Drinking H₂O
WW = Wastewater
O = Oil
P = Wipe
A = Air (Teflon Bag)
F = Filter
T = Tube
M = Methanol

Analysis Requested/Method

REPORT RESULTS TO:

dpen@ast-environmental.com
sshadley@ast-environmental.com
CRAAP RAPIDS MI

Attn: Don & Shawn

PHONE:

FAX:

Sample received within holding time? yes ☐ no ☐

For TCLP ONLY - Federal Limits ☐ Other ☐

Samples intact: yes ☐ no ☐ (if no, see below)

Note samples if not intact:

Headspace/bubbles in VOA'S? yes ☐ no ☐ n/a ☐

Sample containers and COC match? yes ☐ no ☐

Comments:

-PA-GW-GP-8 & 9
may be very hot.

-PA-SB-GP-1 run for
VOLs, HAs, Glycols -
- Filter Metals please
- VOA's for PA-GW-GP-8
are unpreserved

Temperature of Samples °C: 4

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	MAK	Don & Shawn	11/5/09	1720	3			11/6/09	1:30pm
2					4				

METHANOL
EPA 5035
①



Brighton Analytical, L.L.C.™

2105 Pless Drive
Brighton, MI 48114
Phone: 810-229-7575
Fax: 810-229-8650

COMPANY NAME:

PROJECT NAME:

PROJECT NUMBER:

P. O. NUMBER:

REQUESTED TURNAROUND: (circle one)
Rush: 1-3 business days (verify with lab & specify due needed)
Expedited: 5 business days
Standard: 10 business days

IF RUSH,
approved by:

Sampling
Time Date

Sample Description

Brighton ID #

VOA'S (PRES)

HDPE UNPRESERVED

HDPE HNO₃

HDPE H₂SO₄

HDPE NaOH

AMBER

GLASS H₂SO₄

GLASS, NO PRESERVATIVE

MBOH Preserved:
Field (L) Lab Preserved

Container Type & Quantity

ABBREVIATIONS
FOR MATRIX
S = Solid
L = Liquid
DW = Drinking H₂O
WW = Wastewater
O = Oil
P = Wipe
A = Air (Teflon Bag)
F = Filter
T = Tube
M = Methanol

BA PROJECT #:

6348

Analysis Requested/Method

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

Sample Matrix

Vols

Cyande

10 MET Metals

Sample containers and COC match? yes ☐ no ☐

Headspace/bubbles in VOA'S? yes ☐ no ☐ n/a ☐

Note samples if not intact:

Samples intact: yes ☐ no ☐ (if no, see below)

For TCLP ONLY - Federal Limits ☐ Other ☐

Sample received within holding time? yes ☐ no ☐

FAX: E-mail

PHONE:

Attn:

REPORT RESULTS TO:

PAGE 2 OF 2

See pg. 2

Temperature of Samples °C: 4

Comments:

METHANOL

EPA 5035

7

ASTM

Trans. #

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DATE:



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00303

Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-14

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	26	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date: 12/23/09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/22/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00304

Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-12: 7'-8'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Lead	14000	ug/Kg	1000	SW846 6020	GW	12/21/2009
Metal Soil (digestion)	Digested			3050	LS	12/18/2009
Volatile Analysis(Methanol Preserved)						
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
1,2-Dibromoethane(Ethylene Dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	12/18/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
Ethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	12/18/2009
MTBE	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	12/18/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	12/18/2009
Xylenes(total)	Not detected	ug/Kg	150	SW846 8260B	CW	12/18/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	12/15/2009
%Solid	78	%		ASTM D-2216	LS	12/18/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date: 12.23.09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00305

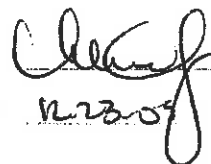
Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-12

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	15	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12-23-09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00306

Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-10

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	37	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	2	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	130	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	27	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	54	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	45	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	93	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	4	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	130	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	220	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	110	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	69	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12/23/09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

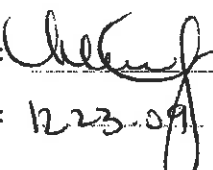
To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00307

Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-13

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	Not detected	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	1	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by: 

Date: 12-23-09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/22/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00308

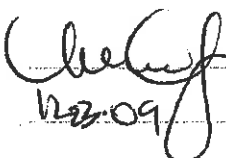
Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-13 MS

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	102%	ug/L		EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Carbon tetrachloride	91	%		SW846 8260B	CW	12/17/2009
Chlorobenzene	81	%		SW846 8260B	CW	12/17/2009
Chloroform	105	%		SW846 8260B	CW	12/17/2009
cis-1,3-Dichloropropene	68	%		SW846 8260B	CW	12/17/2009
Dibromochloromethane	95	%		SW846 8260B	CW	12/17/2009
1,2-Dichlorobenzene	85	%		SW846 8260B	CW	12/17/2009
1,3-Dichlorobenzene	86	%		SW846 8260B	CW	12/17/2009
1,4-Dichlorobenzene	85	%		SW846 8260B	CW	12/17/2009
1,1-Dichloroethane	110	%		SW846 8260B	CW	12/17/2009
1,2-Dichloroethane	94	%		SW846 8260B	CW	12/17/2009
1,1-Dichloroethene	117	%		SW846 8260B	CW	12/17/2009
1,2-Dichloropropane	87	%		SW846 8260B	CW	12/17/2009
Tetrachloroethane	89	%		SW846 8260B	CW	12/17/2009
1,1,2,2-Tetrachloroethane	93	%		SW846 8260B	CW	12/17/2009
1,1,2-Trichloroethane	89	%		SW846 8260B	CW	12/17/2009
Trichloroethene	88	%		SW846 8260B	CW	12/17/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12-22-09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/22/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00309

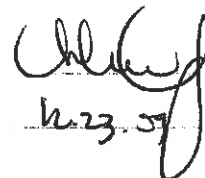
Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-13 MSD

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	102%	ug/L		EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Carbon tetrachloride	87	%		SW846 8260B	CW	12/17/2009
Chlorobenzene	77	%		SW846 8260B	CW	12/17/2009
Chloroform	96	%		SW846 8260B	CW	12/17/2009
cis-1,3-Dichloropropene	62	%		SW846 8260B	CW	12/17/2009
Dibromochloromethane	87	%		SW846 8260B	CW	12/17/2009
1,2-Dichlorobenzene	82	%		SW846 8260B	CW	12/17/2009
1,3-Dichlorobenzene	83	%		SW846 8260B	CW	12/17/2009
1,4-Dichlorobenzene	81	%		SW846 8260B	CW	12/17/2009
1,1-Dichloroethane	97	%		SW846 8260B	CW	12/17/2009
1,2-Dichloroethane	85	%		SW846 8260B	CW	12/17/2009
1,1-Dichloroethene	107	%		SW846 8260B	CW	12/17/2009
1,2-Dichloropropane	80	%		SW846 8260B	CW	12/17/2009
Tetrachloroethane	83	%		SW846 8260B	CW	12/17/2009
1,1,2,2-Tetrachloroethane	87	%		SW846 8260B	CW	12/17/2009
1,1,2-Trichloroethane	82	%		SW846 8260B	CW	12/17/2009
Trichloroethene	81	%		SW846 8260B	CW	12/17/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12-23-09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00310

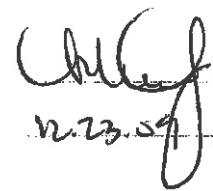
Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: PA-SB-GP-11

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	26	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12.23.09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/23/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00311

Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: Duplicate

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Dissolved Metal Analysis						
Dissolved Lead	28	ug/L	3	EPA 200.8 rev5.4	GW	12/18/2009
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/22/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Toluene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/22/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/22/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 12/15/2009
Submit Date: 12/16/2009
Report Date: 12/22/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6565
BA Sample ID: BT00312

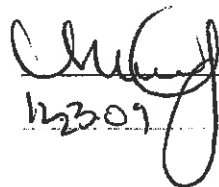
Project Name: Jackson, MI
Project Number: 6715-15
Sample ID: Trip Blank

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Volatile Analysis						
Benzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
1,2-Dibromoethane	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
1,2-Dichloroethane	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
Ethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
Isopropylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
2-Methylnaphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/17/2009
MTBE	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
Naphthalene	Not detected	ug/L	5	SW846 8260B	CW	12/17/2009
n-Propylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
Toluene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
1,2,3-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
1,2,4-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
1,3,5-Trimethylbenzene	Not detected	ug/L	1	SW846 8260B	CW	12/17/2009
Xylenes(total)	Not detected	ug/L	3	SW846 8260B	CW	12/17/2009


DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


12/30/09

GRAND RAPIDS

 Brighton Analytical, L.L.C. 2105 Pless Drive Brighton, MI 48114 Phone: 810-229-7575 Fax: 810-229-8650		BA PROJECT # 6563		Analysis Requested/Method		PAGE <u>1</u> OF <u>1</u>	
COMPANY NAME: ASTI		ABBREVIATIONS FOR MATRIX S = Solid L = Liquid PW = Drinking H ₂ O WW = Wastewater C = Oil P = Waste A = Air (cedar bag) F = Filter T = Tube M = Methanol		REPORT RESULTS TO:		dpeniman@ast-env.com	
PROJECT NAME: 6715-15		FOR DISSOLVED METALS (L) LAB TO FILTER (P) FIELD FILTERED		PHONE:		FAX: E-mail	
PROJECT NUMBER: Jackson, MI		Sample Matrix		Sample received within holding time? yes <input type="checkbox"/> no <input type="checkbox"/>		For TCLP ONLY - Federal Limits <input type="checkbox"/> Other <input type="checkbox"/>	
P.O. NUMBER:		Container Type & Quantity		Leaded/Unleaded Gasoline w/lead		Samples intact: yes <input type="checkbox"/> no <input type="checkbox"/> (if no, see below)	
REQUIRED TURNAROUND: (circle one) Rush 1 business days (weekend & after 5:00 PM add 1 day) Expedited 2 business days Standard 4 business days		VOA'S (PRES) N		Leaded/Unleaded Gas. (lincs only)		Note samples if not intact:	
IRUSH, approved by:		GLASS, NO PRESERVATIVE		FOR DISSOLVED METALS (L) LAB TO FILTER (P) FIELD FILTERED		Headspace/bubbles in VOA'S? yes <input type="checkbox"/> no <input type="checkbox"/> n/a <input type="checkbox"/>	
Sample Description		GLASS H₂SO₄		Sample containers and COC match? yes <input type="checkbox"/> no <input type="checkbox"/>		Comments:	
Brighton ID #		AMBER		Sample Matrix		Samples from PA-SBs	
Time		DATE		Sample Matrix		Gr-12 & GP-10 are hot!	
PA-SB - GR-14		DATE 12/15/09		Sample Matrix		Filter Water Samples	
PA-SB - GP-12; 7-8		DATE 12/15		Sample Matrix		Distillate Brighton	
PA-SB - GP-12		DATE 1140		Sample Matrix		METHANOL	
PA-SB - GP-10		DATE 1215		Sample Matrix		EPA 5035	
PA-SB - GP-13		DATE 1330		Sample Matrix		Temperature of Samples °C: 4	
PA-SB - GP-13 MS/MSD		DATE 1330		Sample Matrix			
PA-SB - GP-11		DATE 1400		Sample Matrix			
Duplicate		DATE —		Sample Matrix			
Trip Blank		DATE —		Sample Matrix			
10)		DATE —		Sample Matrix			
11)		DATE —		Sample Matrix			

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
[Signature]		[Signature]		[Signature]		[Signature]	
DATE: 12/15/09		DATE: 12/15/09		DATE: 12/16/09		DATE: 12/16/09	
TIME: 1610		TIME: 1610		TIME: 1610		TIME: 1250	

Attachment 9.8

Analytical Results – Soil Samples

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08344Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-2; 2'-3'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	8700	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Barium	180000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Cadmium	420	ug/Kg	50	SW846 6020	GW	11/11/2009
Total Chromium	8700	ug/Kg	500	SW846 6020	GW	11/11/2009
Total Copper	15000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Lead	40000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Mercury	60	ug/Kg	50	SW846 7471A	KW	11/10/2009
Total Selenium	430	ug/Kg	200	SW846 6020	GW	11/11/2009
Total Silver	Not detected	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Zinc	92000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
Volatile Analysis(Methanol Preserved)						
Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: **6048**
BA Sample ID: **BS08344**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-2; 2'-3'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009BA Report Number: 6048
BA Sample ID: BS08344Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-2; 2'-3'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	88	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/16/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08345

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-1; 1'-2'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Glycol Analysis						
Ethylene Glycol	Not detected	ug/Kg	10000	SW846 8015	BY	11/13/2009
Propylene Glycol	Not detected	ug/Kg	10000	SW846 8015	BY	11/13/2009
PNA Analysis						
Acenaphthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Acenaphthylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(b)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(g,h,i)perylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(k)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Chrysene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Dibenzo(a,h)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluorene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Indeno(1,2,3-cd)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Naphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Phenanthrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009
Volatile Analysis(Methanol Preserved)						
Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/16/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: **6048**
BA Sample ID: **BS08345**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-1; 1'-2'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

Sample Date: 11/5/2009
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660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08345**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-1; 1'-2'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009



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Report Date: 11/16/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: **6048**
BA Sample ID: **BS08345**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-1; 1'-2'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	89	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: 6048
BA Sample ID: BS08348

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-4; 2.5'-4.5'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	8100	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Barium	62000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Cadmium	310	ug/Kg	50	SW846 6020	GW	11/11/2009
Total Chromium	11000	ug/Kg	500	SW846 6020	GW	11/11/2009
Total Copper	34000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Lead	100000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Mercury	120	ug/Kg	50	SW846 7471A	KW	11/10/2009
Total Selenium	330	ug/Kg	200	SW846 6020	GW	11/11/2009
Total Silver	110	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Zinc	72000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
PNA Analysis						
Acenaphthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Acenaphthylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)anthracene	620	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)pyrene	650	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(b)fluoranthene	610	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(g,h,i)perylene	500	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(k)fluoranthene	610	ug/Kg	330	SW846 8270C	RG	11/11/2009
Chrysene	760	ug/Kg	330	SW846 8270C	RG	11/11/2009
Dibenzo(a,h)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluoranthene	1400	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluorene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Indeno(1,2,3-cd)pyrene	430	ug/Kg	330	SW846 8270C	RG	11/11/2009
2-Methylnaphthalene	420	ug/Kg	330	SW846 8270C	RG	11/11/2009
Naphthalene	400	ug/Kg	330	SW846 8270C	RG	11/11/2009
Phenanthrene	1000	ug/Kg	330	SW846 8270C	RG	11/11/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: **6048**
BA Sample ID: **BS08348**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-4; 2.5'-4.5'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Pyrene	1300	ug/Kg	330	SW846 8270C	RG	11/11/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009

Volatile Analysis(Methanol Preserved)

Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	74	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

Sample Date: 11/5/2009
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660 Cascade West Parkway, SE
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BA Report Number: **6048**
BA Sample ID: **BS08348**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-4; 2.5'-4.5'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	150	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009



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660 Cascade West Parkway, SE
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Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08348

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-4; 2.5'-4.5'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	92	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: 6048
BA Sample ID: BS08349

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-4; 2.5'-4.5' MS

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	110%	ug/Kg		SW846 6020	GW	11/11/2009
Total Barium	97%	ug/Kg		SW846 6020	GW	11/11/2009
Total Cadmium	97%	ug/Kg		SW846 6020	GW	11/11/2009
Total Chromium	106%	ug/Kg		SW846 6020	GW	11/11/2009
Total Copper	94%	ug/Kg		SW846 6020	GW	11/11/2009
Total Lead	107%	ug/Kg		SW846 6020	GW	11/11/2009
Total Mercury	85%	ug/Kg		SW846 7471A	KW	11/10/2009
Total Selenium	108%	ug/Kg		SW846 6020	GW	11/11/2009
Total Silver	98%	ug/Kg		SW846 6020	GW	11/11/2009
Total Zinc	105%	ug/Kg		SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009
Semi-Volatile Analysis						
Acenaphthene	105	%		8270/625	RG	11/11/2009
4-Chloro-3-methylphenol	92	%		8270/625	RG	11/11/2009
2-Chlorophenol	91	%		8270/625	RG	11/11/2009
Dibenzofuran	101	%		8270/625	RG	11/11/2009
1,4-Dichlorobenzene	90	%		8270/625	RG	11/11/2009
Di-n-butylphthalate	120	%		8270/625	RG	11/11/2009
2,4-Dinitrotoluene	98	%		8270/625	RG	11/11/2009
2-Methylnapthalene	97	%		8270/625	RG	11/11/2009
2-Methylphenol	88	%		8270/625	RG	11/11/2009
3-Nitroaniline	93	%		8270/625	RG	11/11/2009
4-Nitrophenol	54	%		8270/625	RG	11/11/2009
N-Nitrosodi-n-propylamine	95	%		8270/625	RG	11/11/2009
Pentachlorophenol	45	%		8270/625	RG	11/11/2009
Phenol	102	%		8270/625	RG	11/11/2009



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08349

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-4; 2.5'-4.5' MS

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Pyrene	114	%		8270/625	RG	11/11/2009
1,2,4-Trichlorobenzene	96	%		8270/625	RG	11/11/2009
2,4,5-Trichlorophenol	81	%		8270/625	RG	11/11/2009
Volatile Analysis						
Carbon tetrachloride	84	%		SW846 8260B	CW	11/11/2009
Chlorobenzene	87	%		SW846 8260B	CW	11/11/2009
Chloroform	92	%		SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	81	%		SW846 8260B	CW	11/11/2009
Dibromochloromethane	94	%		SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	87	%		SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	87	%		SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	93	%		SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	103	%		SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	95	%		SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	104	%		SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	87	%		SW846 8260B	CW	11/11/2009
Tetrachloroethane	87	%		SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	88	%		SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	87	%		SW846 8260B	CW	11/11/2009
Trichloroethene	86	%		SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	92	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

Jeffrey
11/16/09



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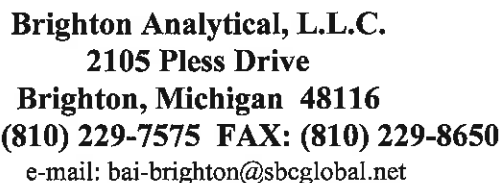
Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08350

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-4; 2.5'-4.5' MSD

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	107%	ug/Kg		SW846 6020	GW	11/11/2009
Total Barium	98%	ug/Kg		SW846 6020	GW	11/11/2009
Total Cadmium	103%	ug/Kg		SW846 6020	GW	11/11/2009
Total Chromium	105%	ug/Kg		SW846 6020	GW	11/11/2009
Total Copper	93%	ug/Kg		SW846 6020	GW	11/11/2009
Total Lead	107%	ug/Kg		SW846 6020	GW	11/11/2009
Total Mercury	83%	ug/Kg		SW846 7471A	KW	11/10/2009
Total Selenium	105%	ug/Kg		SW846 6020	GW	11/11/2009
Total Silver	97%	ug/Kg		SW846 6020	GW	11/11/2009
Total Zinc	103%	ug/Kg		SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009
Semi-Volatile Analysis						
Acenaphthene	106	%		8270/625	RG	11/11/2009
4-Chloro-3-methylphenol	95	%		8270/625	RG	11/11/2009
2-Chlorophenol	93	%		8270/625	RG	11/11/2009
Dibenzofuran	101	%		8270/625	RG	11/11/2009
1,4-Dichlorobenzene	92	%		8270/625	RG	11/11/2009
Di-n-butylphthalate	127	%		8270/625	RG	11/11/2009
2,4-Dinitrotoluene	105	%		8270/625	RG	11/11/2009
2-Methylnaphthalene	99	%		8270/625	RG	11/11/2009
2-Methylphenol	92	%		8270/625	RG	11/11/2009
3-Nitroaniline	99	%		8270/625	RG	11/11/2009
4-Nitrophenol	55	%		8270/625	RG	11/11/2009
N-Nitrosodi-n-propylamine	100	%		8270/625	RG	11/11/2009
Pentachlorophenol	51	%		8270/625	RG	11/11/2009
Phenol	105	%		8270/625	RG	11/11/2009
Pyrene	103	%		8270/625	RG	11/11/2009



Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: **6048**
BA Sample ID: **BS08350**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-4; 2.5'-4.5' MSD**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,2,4-Trichlorobenzene	97	%		8270/625	RG	11/11/2009
2,4,5-Trichlorophenol	84	%		8270/625	RG	11/11/2009
Volatile Analysis						
Carbon tetrachloride	82	%		SW846 8260B	CW	11/11/2009
Chlorobenzene	87	%		SW846 8260B	CW	11/11/2009
Chloroform	82	%		SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	78	%		SW846 8260B	CW	11/11/2009
Dibromochloromethane	94	%		SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	96	%		SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	87	%		SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	92	%		SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	98	%		SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	93	%		SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	100	%		SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	84	%		SW846 8260B	CW	11/11/2009
Tetrachloroethane	84	%		SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	86	%		SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	86	%		SW846 8260B	CW	11/11/2009
Trichloroethene	82	%		SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	92	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

11/16/89



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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08351

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-3; 2'-4'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	12000	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Barium	13000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Cadmium	190	ug/Kg	50	SW846 6020	GW	11/11/2009
Total Chromium	6100	ug/Kg	500	SW846 6020	GW	11/11/2009
Total Copper	9200	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Lead	9600	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Mercury	Not detected	ug/Kg	50	SW846 7471A	KW	11/10/2009
Total Selenium	620	ug/Kg	200	SW846 6020	GW	11/11/2009
Total Silver	Not detected	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Zinc	76000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
PNA Analysis						
Acenaphthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Acenaphthylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(b)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(g,h,i)perylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(k)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Chrysene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Dibenzo(a,h)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluorene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Indeno(1,2,3-cd)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Naphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Phenanthrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009BA Report Number: **6048**
BA Sample ID: **BS08351**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-3; 2'-4'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009

Volatile Analysis(Methanol Preserved)

Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: **6048**
BA Sample ID: **BS08351**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-SB-GP-3; 2'-4'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmeylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	110	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08351Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-SB-GP-3; 2'-4'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	93	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



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To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: 6048
BA Sample ID: BS08352

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: Duplicate

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	13000	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Barium	15000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Cadmium	180	ug/Kg	50	SW846 6020	GW	11/11/2009
Total Chromium	5100	ug/Kg	500	SW846 6020	GW	11/11/2009
Total Copper	13000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Lead	12000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Mercury	Not detected	ug/Kg	50	SW846 7471A	KW	11/10/2009
Total Selenium	350	ug/Kg	200	SW846 6020	GW	11/11/2009
Total Silver	Not detected	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Zinc	44000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
PNA Analysis						
Acenaphthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Acenaphthylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(a)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(b)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(g,h,i)perylene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Benzo(k)fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Chrysene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Dibenzo(a,h)anthracene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluoranthene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Fluorene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Indeno(1,2,3-cd)pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Naphthalene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
Phenanthrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: **6048**
BA Sample ID: **BS08352**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Duplicate**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Pyrene	Not detected	ug/Kg	330	SW846 8270C	RG	11/11/2009
PNA solid GC/MS (extraction)	Extracted			3510/3550	MB	11/11/2009

Volatile Analysis(Methanol Preserved)

Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

To: Applied Science and Technology

660 Cascade West Parkway, SE

Suite 210

Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: 6048

BA Sample ID: BS08352

Project Name: 546 N. Mechanic

Project Number: 6715-15

Sample ID: Duplicate

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009BA Report Number: **6048**
BA Sample ID: **BS08352**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Duplicate**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	92	%		ASTM D-2216	GW	11/10/2009

All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:


11/16/09



Brighton Analytical, L.L.C.

2105 Pless Drive

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Phone: (810) 229-7575 FAX: (810) 229-8650

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To: Applied Science and Technology

660 Cascade West Parkway, SE

Suite 210

Grand Rapids, MI 49546

Sample Date: 11/5/2009

Submit Date: 11/6/2009

Report Date: 11/13/2009

BA Report Number: 6048

BA Sample ID: BS08353

Project Name: 546 N. Mechanic

Project Number: 6715-15

Sample ID: PA-GW-GP-7; 11'-12'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Total Metal Analysis						
Total Arsenic	14000	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Barium	19000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Cadmium	170	ug/Kg	50	SW846 6020	GW	11/11/2009
Total Chromium	8300	ug/Kg	500	SW846 6020	GW	11/11/2009
Total Copper	26000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Lead	25000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Total Mercury	Not detected	ug/Kg	50	SW846 7471A	KW	11/10/2009
Total Selenium	2400	ug/Kg	200	SW846 6020	GW	11/11/2009
Total Silver	Not detected	ug/Kg	100	SW846 6020	GW	11/11/2009
Total Zinc	450000	ug/Kg	1000	SW846 6020	GW	11/11/2009
Metal Soil (digestion)	Digested			3050	LS	11/10/2009
Mercury (digestion)	Digested			7470/7471	KW	11/10/2009
Inorganic Analysis						
Total Cyanide	Not detected	ug/Kg	100	SW846 9010B	RM	11/10/2009
Volatile Analysis(Methanol Preserved)						
Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546BA Report Number: 6048
BA Sample ID: BS08353Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-7; 11'-12'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009



Brighton Analytical, L.L.C.
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Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: 6048
BA Sample ID: BS08353

Project Name: 546 N. Mechanic
Project Number: 6715-15
Sample ID: PA-GW-GP-7; 11'-12'

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009
EPA Method 5035 Methanol Preserv	Extracted			EPA 5035	AST	11/5/2009
%Solid	78	%		ASTM D-2216	GW	11/10/2009



Brighton Analytical, L.L.C.
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Brighton, Michigan 48116
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Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

BA Report Number: **6048**
BA Sample ID: **BS08353**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **PA-GW-GP-7; 11'-12'**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
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All soil results based on dry weight.

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:

Date:

Utopol
11/16/09

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009

Submit Date: 11/6/2009

Report Date: 11/13/2009

BA Report Number: 6048

BA Sample ID: BS08358

Project Name: 546 N. Mechanic

Project Number: 6715-15

Sample ID: Meth Blank

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Volatile Analysis(Methanol Preserved)						
Acetone	Not detected	ug/Kg	750	SW846 8260B	CW	11/11/2009
Acrylonitrile	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
Benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromodichloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromoform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Bromomethane(Methyl bromide)	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
2-Butanone (MEK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Carbon disulfide	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Carbon tetrachloride	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloroethane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Chloroform	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Chloromethane(Methyl chloride)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
cis-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
cis-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Cyclohexane	Not detected	ug/Kg	500	SW846 8260B	CW	11/11/2009
1,2-Dibromo-3-Chloropropane	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Dibromochloromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dibromoethane(Ethylene dibromide)	Not detected	ug/Kg	20	SW846 8260B	CW	11/11/2009
Dibromomethane(Methylene bromide)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,4-Dichlorobenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Dichlorodifluoromethane	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
1,1-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009BA Report Number: **6048**
BA Sample ID: **BS08358**Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Meth Blank**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Diethyl ether	Not detected	ug/Kg	200	SW846 8260B	CW	11/11/2009
Diisopropyl Ether(DIPE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Ethyl benzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Ethyltertiary butylether(ETBE)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
2-Hexanone(Methyl Butyl Ketone)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Isopropylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl iodide(Iodomethane)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Methyl(tert)butyl ether(MTBE)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
4-Methyl-2-pentanone(MIBK)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Methylene chloride	Not detected	ug/Kg	100	SW846 8260B	CW	11/11/2009
2-Methylnaphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Naphthalene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
n-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
n-Propylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
p-Isopropyl Toluene(p-Cymene)	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
sec-Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Styrene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
tertiary Amylmethylether(TAME)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Tertiary Butyl Alcohol(TBA)	Not detected	ug/Kg	2500	SW846 8260B	CW	11/11/2009
tertiary Butylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,1,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2,2-Tetrachloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrachloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Tetrahydrofuran(THF)	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
Toluene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,2-Dichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,3-Dichloropropene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
trans-1,4-Dichloro-2-butene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,2,4-Trichlorobenzene	Not detected	ug/Kg	250	SW846 8260B	CW	11/11/2009
1,1,1-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,1,2-Trichloroethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009



Brighton Analytical, L.L.C.
2105 Pless Drive
Brighton, Michigan 48116
Phone: (810) 229-7575 FAX: (810) 229-8650
e-mail: bai-brighton@sbcglobal.net

To: Applied Science and Technology
660 Cascade West Parkway, SE
Suite 210
Grand Rapids, MI 49546

Sample Date: 11/5/2009
Submit Date: 11/6/2009
Report Date: 11/13/2009

BA Report Number: **6048**
BA Sample ID: **BS08358**

Project Name: **546 N. Mechanic**
Project Number: **6715-15**
Sample ID: **Meth Blank**

Parameters	Results	Units	DL	Method Reference	Analyst	Analysis Date
Trichloroethene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Trichlorofluoromethane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trichloropropane	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,3-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,2,4-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
1,3,5-Trimethylbenzene	Not detected	ug/Kg	50	SW846 8260B	CW	11/11/2009
Vinyl chloride	Not detected	ug/Kg	40	SW846 8260B	CW	11/11/2009
Xylenes	Not detected	ug/Kg	150	SW846 8260B	CW	11/11/2009

DL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDEQ designated target detection limits (TDL).

Released by:
Date:

Utopol
11/12/09



Brighton Analytical, L.L.C.TM

2105 Pless Drive
Brighton, MI 48114
Phone: 810-229-7575
Fax: 810-229-8650

COMPANY NAME:

PROJECT NAME:

PROJECT NUMBER:

P. O. NUMBER:

REQUESTED TURNAROUND: (circle one)
Rush: 1-3 business days (verify with lab & specify date needed)
Expedited: 3 business days
Standard: 10 business days

IF RUSH,
approved by:

Sampling
Time Date

Sample Description

VOA'S PRES. Y

HDPE UNPRESERVED

HDPE HNO₃

HDPE H₂SO₄

HDPE NaOH

AMBER

GLASS H₂SO₄

GLASS, NO PRESERVATIVE

MPHOL Preserved

Field (Lab Preserved)

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

VOCs

Cyanide

10 MIF Metals

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

VOCs

Cyanide

10 MIF Metals

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

VOCs

Cyanide

10 MIF Metals

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

VOCs

Cyanide

10 MIF Metals

Sample Matrix

FOR DISSOLVED METALS (L) LAB TO FILTER (F) FIELD FILTERED

8357 Duplicate

58 Meth Blank

59 Trip Blank

60 Equipment Blank

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11/5/09 2 1

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11/5/09 2 1

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8357 Duplicate

58 Meth Blank

59 Trip Blank

60 Equipment Blank

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Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #

RELINQUISHED BY:

RECEIVED BY:

DATE:

TIME:

RELINQUISHED BY:

RECEIVED BY:

DATE:

TIME:

1

Watt R

Don't Ervin's House

11/5/09 1720

3

Relinquished

11/6/09

1:30 PM

1:30 PM

2